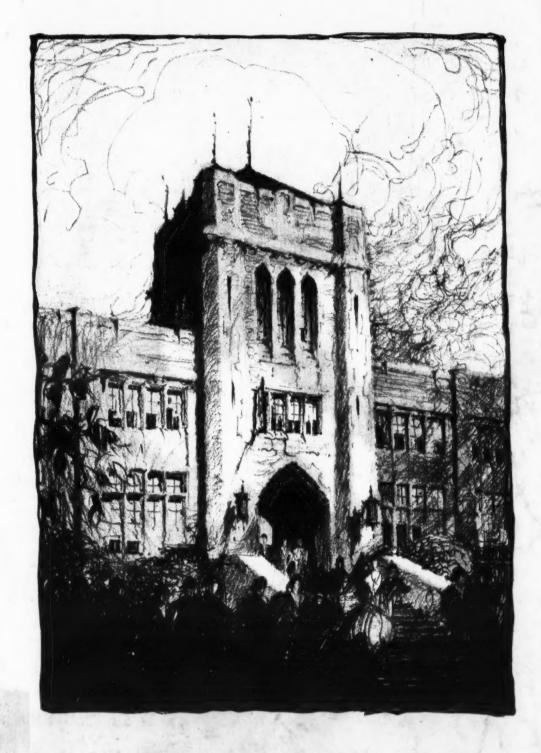
PERIODICAL ROOM CENERAL LUDRARY CENERAL AUDRARY

FLU 0 1930

School Board Journal

A PERIODICAL 9 SCHOOL ADMINISTRATION



FEBRUARY 1930

THE BRUCE PUBLISHING COMPANY

New York

Milwaukee, Wisconsin

Chicago

Announcing The Ediphone School Department



THE Ediphone, a product of Thomas A. Edison Industries, serves and aids daily, a vast business army in the flow of business correspondence.

The widespread acceptance of Ediphone Service justifies the close attention given this product by educators of national prominence.

To meet the specific needs of this service and to extend still further its usefulness, The Ediphone Division of Thomas A. Edison Industries announces the formation of The Ediphone School Department.

Correspondence is invited.

Ediphone

Edison's New Dictating Machine

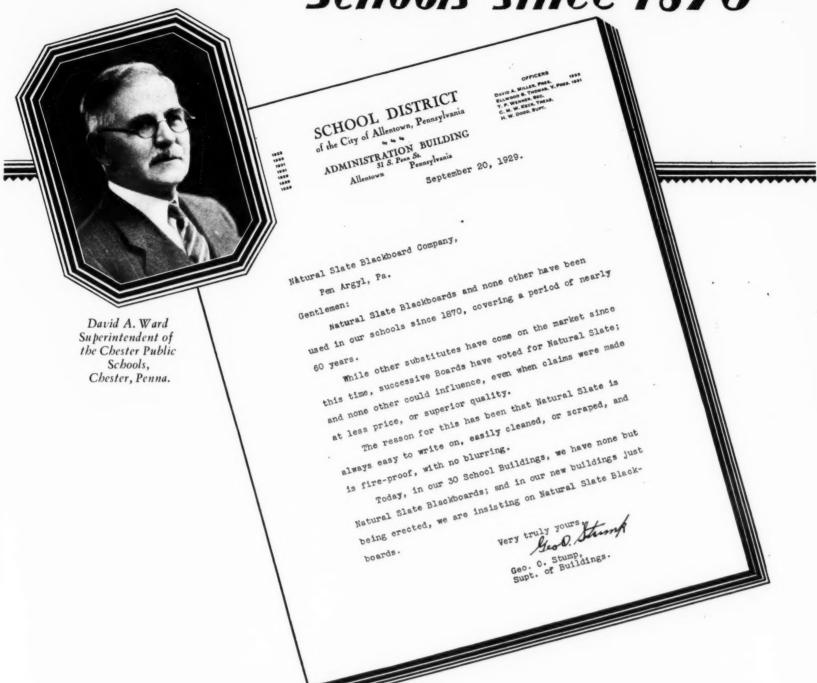
THOMAS A. EDISON, INC.

World-Wide Service

Laboratory & General Offices

ORANGE, N. J.

Natural Slate Blackboards and none other have been used in our Schools since 1870"



Mr. Ward joins the army of Public School Officials who endorse Natural Slate Blackboards for their everlasting qualities.

Natural Slate Blackboards are Sanitary, Dustless, Fireproof, Easy to Clean--Always like new. They increase schoolroom efficiency and the morale of both teachers and pupils.

Naturally the leading superintendents of the country, experiencing these unexcelled qualities, put them as their first choice.

Write for two booklets completely describing these boards . . . specifications . . . data and an interesting story on the quarrying and finishing of slate.

Address your request on your business stationery to

NATURAL SLATE BLACKBOARD CO., 240 ROBINSON AVE., PEN ARGYL, PA.

NATUDAL STATE DIACKDOANUS

Matural Slate Blackboards Outlast the Building



MARYSVILLE, CALIF., HIGH SCHOOL KEPT CLEAN AND BRIGHT WITH MIDLAND CHEMICAL PRODUCTS.

The

Importance of Cleanliness

Clean comfortable school rooms mean happy efficient students. Cleanliness means health. Maximum attendance depends on health, therefore, cleanliness is important.

The Midland Chemical Laboratories, Inc., have perfected a system of SCHOOL HOUSEKEEPING which has increased the capacity of the janitor and at the same time reduced upkeep costs.

STANDARD MATERIALS are used. For every cleaning operation Midland Chemists have provided a product of unusual quality.

STANDARD TOOLS are used. For every activity of the janitor there is a tool best suited to the work. Many experiments, tests, actual work have shown what tools do the job best. Mop sweeping for instance is one of the greatest steps forward in scientific school-room upkeep. A Midland innovation.

STANDARD METHODS are used. There is a right way, an economical way to perform every task. Midland System of School Housekeeping points the way to better cleaner schools at less cost.

Be sure to visit our Exhibit at the
NATIONAL EDUCATION ASSOCIATION CONVENTION
Atlantic City, N. J. — Feb. 22-27, 1930
BOOTH K 41

IF YOU ARE INTERESTED in school building upkeep write to

Midland Chemical Laboratories, Inc.

Dubuque, Iowa, U. S. A.

KEWANEE

Water Heating GARBAGE BURNERS

Use garbage and rubbish as part of the fuel for heating water. So, they help reduce fuel bills. And, they burn refuse before it has a chance to become obnoxious, so they are a sanitary necessity.

Built of steel (riveted) they give a lifetime of "service"— fit companions for their bigger brothers, Kewanee Boilers.





Details in Catalog No. 75

KEWANEE BOILER CORPORATION

Kewanee, Illinois

division of American Radiator and Standard Sanitary Corporation

Branches in 40 Principal Cities



HOW THIS SCHOOL IS JOHNSON CONTROLLED

The heating and ventilating in the Duniway School, Portland, Oregon, is completely controlled by the Johnson System.

Unit Ventilation is used in the class rooms; the auditorium and gymnasium are heated by a plenum system: and are under Johnson individual Room Thermostat Control.

The valves on the sections of the tempering and reheating coils and the bypass damper under the tempering coils are controlled by Johnson three point multiple thermostats.

A Johnson pneumatic switchboard is located in the engine room for operating individually the dampers in the fresh air intakes, roof exit ducts, auditorium and gymnasium vent ducts.

Such complete service is indeed worthy of every school administrator's consideration: for the correct temperature and hygienic condition in each room and department of the school building, and for the annual fuel economy of 25 to 40 per cent obtained.

Write now for the Johnson Book of complete details, relating Johnson installations as applied to every form, plan and system of heating and ventilating.

JOHNSON SERVICE COMPANY, Milwaukee, Wis. Established 1885

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CONTROL



ME TO CATCH ALL THOSE WASTEFUL FOOTSTEPS!

THE time is now. The place is any place in a school where a wasted footstep has stolen away its bit of some teacher's valuable energy. There are many, many/such/footsteps ... Everlasting footsteps - footsteps -footsteps, walking away patience; stealing precious minutes-here-there-everywhere...And all for little matters of routine; for a moment's conference, to deliver a message, to get a report... How much easier - how much quicker - to press a button at one's desk, and let the Inter-Phone do the rest! /. . Footsteps add up. In large institutions their sum total can be enormous The Inter-Phone is trapping these footsteps, wholesale - and reclaiming all the lost minutes they imply. It is freeing people's energies. It is doing away with fatigue, that arch-enemy of real efficiency. compact, interior telephone system, the Inter-Phone brings remote sections of the building within arm's reach. It requires no operator-and may serve from six to twenty-four locations . . . And it is backed by a name that represents sixty years of electrical experience. ... it may be used in conjunction with a complete signalling system which includes audible and visual annunciators for reaching desired individuals by code in all necessary rooms . . . More information? Coupon below!

Tune in on "Mr. and Mrs." . . . Graybar hour, 10 to 10:30, E. S. T., every Tuesday night . . . Columbia Broadcasting System.

GRAYBAR ELECTRIC CO., Graybar Bldg., New York, N. Y. Please tell us more about Inter-Phones. And about the co

ADDRESS





A.S.B.J.-2



Self-Releasing Fire and Panic Exit Latches

Cost—in the Beginning—and in the End.

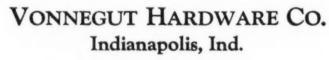
Sweets, Pages C3130-C3135

AIA 27c5

The new series, genuine Type "B" Von Duprins are not cheap when first bought. In fact, they cost more than any others on the market.

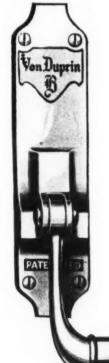
Yet, over a period of years, this higher first cost is far more than overcome by the negligible cost of maintaining them—by the steady, trouble-free service they render every day—by the knowledge that they are so reliable in operation, so durable that they will stand up under the terrific strain of emergency use in case of panic.

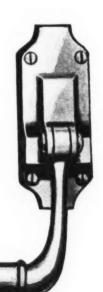
We suggest you make sure of getting genuine Von Duprin Type "B" devices by seeing to it that panic bolts are made a separate item of the specifications—apart from the finishing hardware—and that the devices are specified by name.

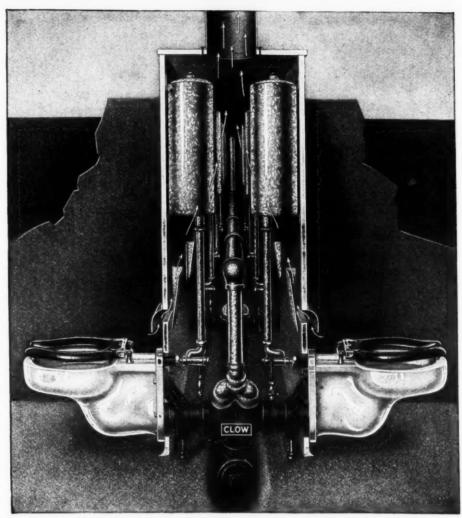


Listed as Standard by Underwriters' Laboratories

You are cordially invited to visit the Von Duprin booth, No. H12, at the N. E. A. Convention, Atlantic City, February 22 to 27.







AUTOMATICALLY FRESH AND CLEAN

with Clow Madden Wallomatics... and Clow Patented Ventilators

Above is shown the application of the Clow Patented Closet Stall Ventilator. Through it, odors are drawn from the toilet room into the utility corridor—and carried off, at the outlet. It is so constructed that paper cannot be stuffed in to stop its action.

Automatically, close trooms are fresh and clean.

And, independently of forgetful minds—Clow Madden Wallomatics send a powerful stream of water, cleansing the entire bowl after every use. There's nothing to touch. Nothing to remember. It's automatic.

RECORD NO. 107
26 years ago, 15 Clow Madden Automatics were installed at the May Street School, Benton Harbor, Michigan. In the past 6 years not one cent has been spent for repairs. No record was kept for previous years.

With Clow Madden Automatics, sanitation is assured for a quarter century and more—as installation records show.

For the Clow Madden Valve has only two moving parts—has no minute by-passes to cause trouble. Tests prove it uses less than half the usual amount of water, for a surer flush.

With Clow Patented Ventilators and Clow Madden Wallomatics, odor-free air and taint-free closets are automatically assured for the life of the building.

(Center Illustration)
Showing how closed top tanks are concealed
in utility corridor behind back wall. Clow
Wallomatics are built free of the floor for
cleaner toilet rooms.

JAMES B. CLOW & SONS, 201-299 NORTH TALMAN AVE., CHICAGO

CLOW MADDEN AUTOMATIC

Forty-Eight Styles, Heights and Types to Meet Your Requirements



Our Contribution to the art of Heating & Ventilation



SEVEN YEARS AGO when the Herman Nelson light weight, compact, indestructible radiator was placed on the market, it was immediately accepted as the greatest advance in the art of Heating and Ventilating in a generation. It has made possible heating and ventilation dependability and performance hitherto unattainable.

The Herman Nelson Wedge Core Radiator is an exclusive feature of all Herman Nelson Heating and Ventilating Products and accounts for their unequaled performance.

UNIVENT

for the ventilation of schools, hospitals, offices and other buildings presenting an acute ventilating problem.



HERMAN NELSON Invisible RADIATOR



... supersedes all previous radiators, radiator cabinets or enclosures. Occupies no room space and makes

possible any desired decorative scheme or furniture arrangement. Indestructible in service.

THE HERMAN NELSON



Itoperates at steam pressures from 1 to 150 lbs., and offers the better and more economical way of diffus-



ing heat in Factories, Railroad Shops, Roundhouses, Mills, Warehouses, Garages, Gymnasiums and Industrial Buildings.

Herman Nelson Radiator Sections for Blast Heating and Cooling



Indestructible, operating at any steam pressure from 1 to 150 lbs., non-corrosive and leak-proof.

May be arranged in banks to solve any special problem of heating or cooling.

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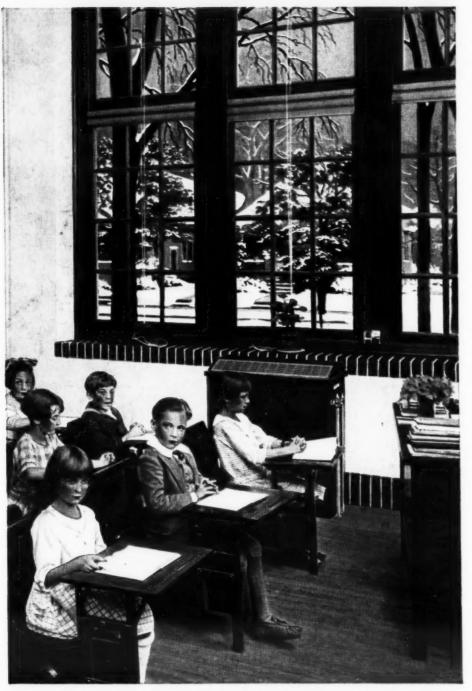
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Here is VENTILATION that cannot be duplicated

Univent and Glass make the difference

SUCCESSFUL results of the Univent have brought national recognition to the basic idea of unit ventilation. With success has come imitation; but—imitation is not duplication.

This fact is becoming more and more known: the results of Univent Ventilation cannot be duplicated by any other unit ventilator. The Univent's important features are exclusive to the Univent.

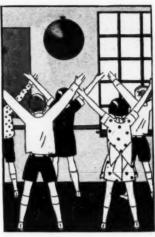
The Univent is a complete individual ventilating machine. Draws air directly from out of doors. Cleans it. Warms it to a comfortable temperature. Distributes it gently to every corner of the room—without draft. Simpler than opening windows and there is no question as to results—

no other ventilator gives

because Univent results are obvious. Better health and attendance records—better concentration of pupils—satisfied teachers—these are some of the results credited to the Univent by school authorities, architects and engineers everywhere who endorse it as the most simple, efficient and economical system of ventilation known. Write for free book of facts, No. 29. The Herman Nelson Corporation, Moline, Illinois.







Exercises and folk dances are given new zest with music —via louds peaker.



The Music Reproducer plays anything on standard laterally-cut records.



The principal's voice may be heard in 15 (or 150) rooms at once.



—One school architect says "For fire use alone, it would more than justify itself."

NOW ALL CAN HEAR THE SMALLEST VOICE

Her tiny voice fills your auditorium when the Western Electric Public Address System is used. This system amplifies sound and distributes it even to the rear seats of the balcony.

It serves one room or many. With a Public Address System, speeches, lectures, general orders, transmitted into your own microphone are broadcast throughout the school, or in just the rooms desired.

The equipment can pick up radio broadcasts, too, bringing history to your class rooms as it is being made. It can send throughout the school the full rich tones of phonograph rec-

ords played on the Western Electric Music Reproducer, assuring courses in music appreciation, masterful performances timed to fit *your* schedule.

For further information, write to the distributor, Graybar Electric Co., Graybar Bldg., New York, N. Y. Offices in 73 principal cities.



Music appreciation courses current events— any radio program can be heard by all.

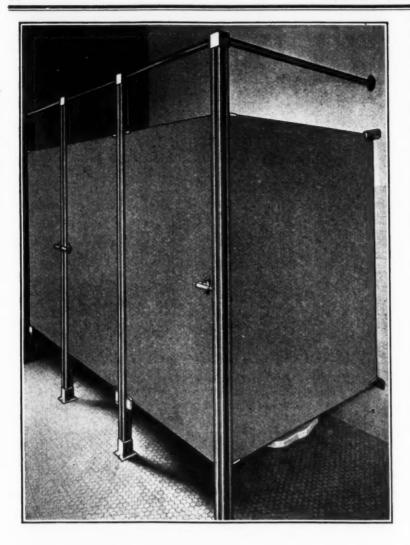


—And the distinguished visitor "visits" all rooms at once—thanks to the microphone.

Western Electric

PUBLIC ADDRESS AND MUSIC REPRODUCTION SYSTEMS

Distributed by GRAYBAR Electric Company



HUNDREDS and hundreds of America's finest school structures are equipped with steel Sanymetal Toilet and Shower Compartments.

Your investment in these units may be made with assurance of genuine good service even under conditions amounting to abuse.

Rugged, clean-cut, sanitary Sanymetal steel enameled units are built for toilets, showers, dressing-rooms, urinals—either molded panel or flush insulated type. Sanymetal steel-and-glass dividing partitions are also furnished for offices, manual training quarters, and corridor fire screens. Ask for detailed catalog.

The Sanymetal Products Co.

1703 Urbana Road

Cleveland, Ohio



FLOORS That Stand Up BUDGETS That Stay Down

One Cent to Two Cents a Square Foot Spent Now for Lignophol Means Better-Looking Wooden Floors and Money Saved

WARPING, rotting, splintering floors in schools are unsightly and dangerous, and a heavy drain on the budget. Yet for a cent or two per square foot you can prevent all that when you use Lignophol. It toughens the wood, increases resistance to dry heat and moisture, waterproofs the surface and makes it easier to keep clean. One State Board of Administration writes: "We have purchased some of the Lignophol for use at the University . . . and they are very much pleased with same." The name of this educational institution, and of many others, will be sent on request. Other high quality Sonneborn products for economical school up-keep are described below. Every one is guaranteed. Read about them. Send the attached coupon today for complete information and letters from satisfied school users.

We have every kind of paint and varnish for every school use from floors to desks —from cellar to roof—for inside and out

For CONCRETE Floors

Hardening and Dustproofing

Lapidolith—This liquid chemical concrete hardener welds the loose particles into a close-grained mass that becomes granite-hard, and eliminates concrete dust. Excellent for basement or any floor receiving hardest wear. The flint-like topping withstands years of traffic. Water or chemicals do not readily penetrate it. Merely mopping and sweeping keeps a Lapidolized concrete floor sanitary. Goes on like water so labor cost is negligible. Equally efficient for old or new floors. Colorless.

Colored Floors

Cement Filler—For floors where decorative appearance is wanted as for hallways, basement rooms, toilets, etc. apply this material over new or old surfaces. Forms a wear-resisting smooth, colored top over rough, pitted or soiled floors. Standard colors. Easy to apply. Labor cost small.

For WOOD Floors

Wearproofing and Dustproofing

Lignophol—This penetrating preservative prevents splintering, checking, warping, and rotting by filling interior wood cells and fibres with oils and gums. Supplies a toughening binder that increases tensile and resisting power of wood. Safeguards floors against deterioration from dry heat and moisture, and waterproofs.

Polished Floors

Amalie Liquid or Paste Wax—Where a more lustrous finish is desired, apply this highly decorative Carnauba Wax. Has high content of Carnauba which is the reason for its long wear. Use liquid for renewing polish on floors previously waxed. Use paste on new or newly treated floors.

L. SONNEBORN SONS, Inc.

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Please send literature on the following I Lignophol; Cemcoat Floor Enam Cemcoat; Sonotint; Amai from satisfied school users.	el; Cement Filler;
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PLASTER that "STAYS PUT"

PLASTERERS like to work over Par-Lock, but that is a small part of the story. Because it holds the plaster with a sure, positive clinch, the day's work goes farther and skilled artisans have a better opportunity to observe those refinements of the art which make a better plastering job.

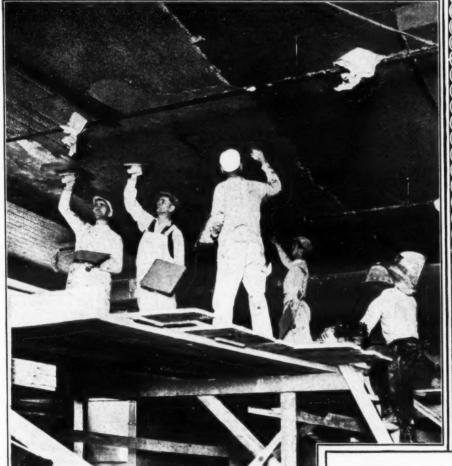
Par-Lock means even more after the job is finished. Its coarse, deeply embedded grit holds the plaster in place for the life of the building. The underlying coatings of pure asphalt protect the plaster against

moisture and stain, beside affording a cushion that adjusts differences in expansion between the plaster and the structural surface.

No wonder that conscientious plastering contractors welcome the specification of Par-Lock (or Dens-tect) which architects are writing for every direct plastering operation that needs to be right. The nearest Par-Lock Applier will gladly furnish details.

THE VORTEX
MANUFACTURING CO.
1987 WEST 77TH STREET
CLEVELAND, OHIO

(See our catalog in Sweet's)





Par Lock

Write to PAR-LOCK APPLIERS OF (Naming City) at Address Given Below

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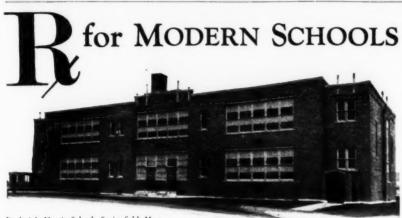
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1700 Walnut Street
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Frederick Harris School, Springfield, Mass, Morris W. Maloney, Architect Schnare Construction Co., Contractor Truscon Joists, Hy-Rib, Reinforcing Bars and Steeldeck Roof

Fireproof Floors

Truscon Steel Joists provide the essential features necessary to school floor construction—fire protection, soundproofness, permanence and economy. In addition, they offer the practical advantages of rapid installation without centering and space for pipes and conduits.

Truscon Steel Joists are designed in accordance with the specifications of The Steel Joist Institute.

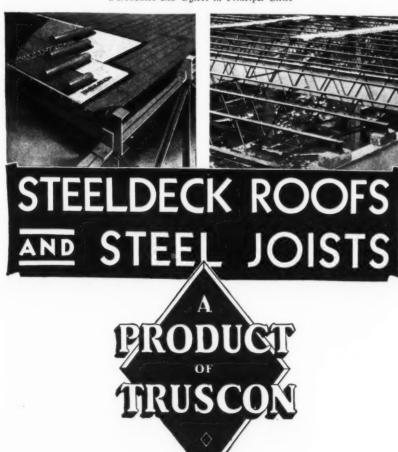
Fireproof Roofs

Truscon Steeldecks provide fireproof roofdecks quickly erected at economical cost. Their light weight effects marked savings in structural supports and makes it unnecessary to reinforce trusses when replacing old roofs. Truscon Steeldecks are insulated to any degree, reducing heating costs and preventing condensation. They are furnished in three types to meet any condition.

Write for full information about these modern constructions for school buildings.

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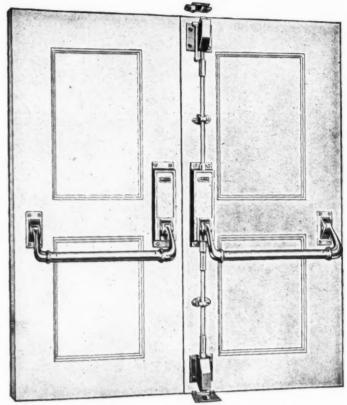
Truscon Steel Company of Canada, Limited, Walkerville, Ontario
Warehouses and Offices in Principal Cities



SMITH'S IMPROVED PANIC EXIT LOCKS

NO. 80 LINE

Gravity Panic Exit Bolts



Inside View Has Outside Trim.

Inside View No Outside Trim.

Bolts are operated by a slight pressure on the Cross Bar.

Bolts are not dependent on springs for opening or closing operation.

Simple but sturdy in construction and easily installed.

Will operate perfectly in connection with standard makes of door closers.

Catalogue No. 30 with Supplement "A" sent on request..

Manufactured by
THE STEFFENS-AMBERG CO.
260-270 Morris Ave.
NEWARK, N. J.

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RUBBERSTONE Asphalt Tile Flooring

Built like a Highway ~ for Wear

was considered a good name for our product. Made of asphalt, known in the trade as mineral "Rubber" and developed by a Mr. Stone—the combination of Rubber and Stone seemed a happy one.

But in time it became evident that Rubberstone frequently implied "rubber tile." During the last few years it has been necessary for us to continually explain, by word and by letter, that Rubberstone was an Asphalt tile.... and bear in mind that Rubberstone pioneered the asphalt-tile type of flooring!

An unfortunate situation—which we now rectify. We are changing the name Rubberstone to

HANOTILE

Asphalt Tile Flooring

Built like a Highway ~ for Wear

We are also changing the name of the company from RUBBERSTONE CORPORATION to

AMERICAN ASPHALT TILE CORPORATION

The product, the company personnel, distributors and business addresses remain unchanged.

The Executive Offices will continue to be at One Madison Avenue, New York City.

The name HANOTILE is derived from the name of our President-Mr. GEORGE C. HANNAM



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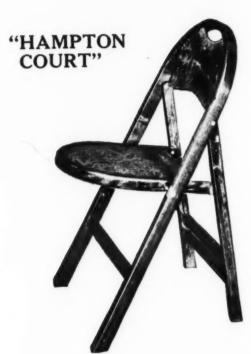
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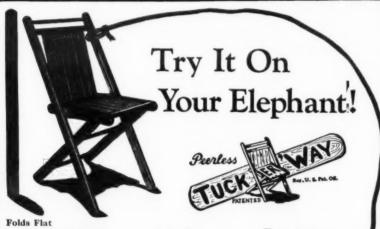
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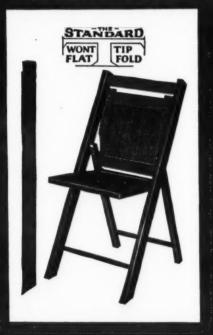
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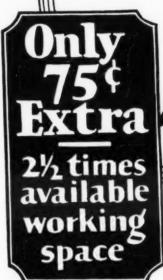
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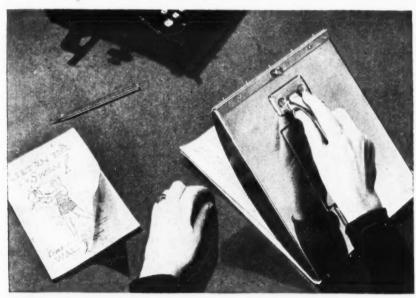
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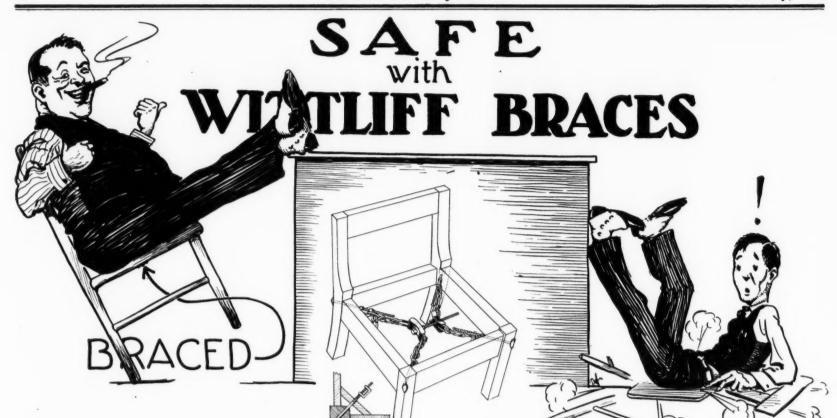
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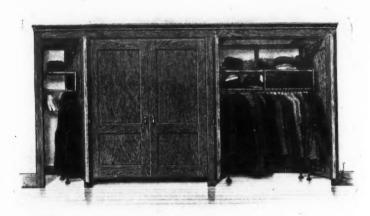
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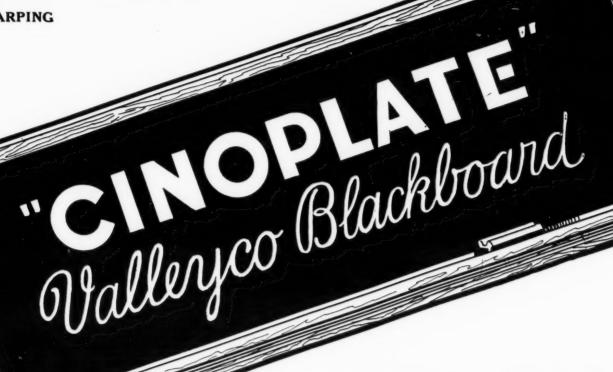
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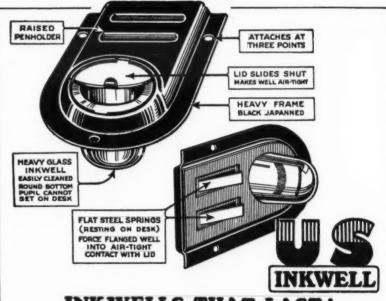
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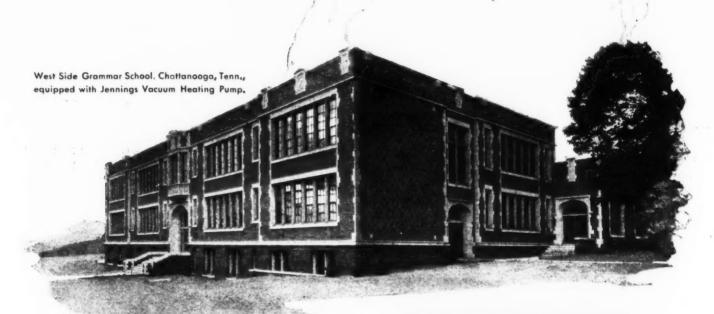
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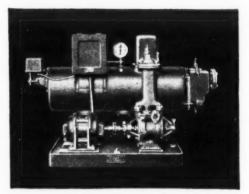
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VOL. 80 No. 2

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FEBRUARY, 1930

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TABLE OF CONTENTS

Harold Heaton	37
Emma M. Lawrence	38
E. L. Tink	39
The Duties of Public-School Administrators—IX	42
Economies Within the Power of School Directors	44
The Jamestown School-Administration Building, Jamestown, New York	45
Budget Your School System Out of the Hole	47
The Role of the School Physician	49
What Interest Shall School Deposits Bring?	51
Selection, Promotion, Tenure, and Dismissal of School Janitor-Engineers	53
Principles Underlying the Minimum Teachers' Salary	55
Present Trends in the Use of Visual-Instruction Aids	56
The John Hay High School	57
Dumont High School, Dumont, New Jersey	60
A Complete Low-Cost School	64
School-Bond Interest Rates Continue Lower Harold F. Clark	68
America's Greatest Educational Gathering	69
School Economy Through Efficient Business Management	70
School Contracts—Lowest Responsible Bidder	
Simplified Accounting System for Small Districts	
New Rules Governing Fire Exit Drills	
Standards for Playground Equipment	
George F. Womrath	130
EDITORIALS:	
Adequate School Support and Methods of Taxation	66
Some Vexatious Problems in School Administration	66
Small Rural and Urban School Systems	
School Law	80
	82
School Administration Notes	
Building News of the Schools	
Superintendents	
New Rules and Regulations	
School Finance and Taxation	
School Hygiene	
Chicago Correspondence	
Personal News of School Officials	
Washington Correspondence	. 133
Book News and Reviews	. 152
After the Meeting	
Buvers' News	. 170



A Marvelous Educational Body

During this month there will be held at Atlantic City, New Jersey, a gathering of men and women which commands nation-wide attention in the field of education. The Department of Superintendence, National Education Association, meets in the city named, on February 22-27, 1930.

This gathering must be deemed marvelous in that it brings together in a joint session the educational giants of the land. The men and women who are in control of the educational destinies of the greatest Republic on earth will enter into an open discussion on the school problems of the day.

There will be school superintendents, supervisors and principals, college and normal-school executives and instructors, as well as leaders in city, county, state, and national educational service. Experts in the several branches of instruction will participate in the discussions. The trends, problems, and achievements of a modern day will be clarified.

No country in the world brings its educators together in greater numbers, drawn from a greater area, and engaging in deliberations with greater enthusiasm, thoroughness, and efficiency, than does the Department of Superintendence of the National Education Association of our own country.

This is due not only to the ambition and zeal of the American educator, but also to the "back home" board of education and those in administrative charge of school affairs. They recognize the value of the clashing of ideas and the exchange of experiment and experience in the school field, and back the educator to the limit, in his efforts to keep abreast with the professional progress of his time.

The AMERICAN SCHOOL BOARD JOURNAL has for over thirty years championed the cause of the Department of Superintendence.

The Editor.

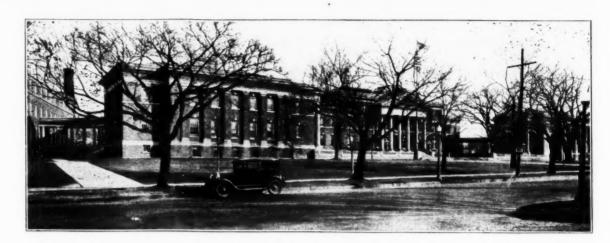
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The contents of this issue are listed in the Education Index.



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THE AMERICAN School Bourd Journal

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Volume 80, No. 2

FEBRUARY, 1930

Subscription, \$3.00 the Year



HOST AND GUEST AT THE ANNUAL MEETING OF THE DEPARTMENT OF SUPERINTENDENCE OF THE NATIONAL EDUCATION ASSOCIATION

How the Superintendent Meets Attendance Problems

Emma M. Lawrence, Child Accounting Department, Owosso, Michigan

The solution of school-attendance problems in any community, hinges on seven well-known principles:

A full and an accurate census.

2. An accurate check between the census and the school enrollment.

3. A quick report on initial enrollments.

4. The adoption of a policy limiting exemptions from the compulsory-education law.

5. An immediate enforcement of the compulsoryeducation law.

6. Educating the public in the ideals of school attendance.

7. Keeping and maintaining correct and convenient records of attendance.

The principles above are applicable to every public-school system. The details of application must vary with the size of the school system and the funds available for administration.

This paper deals with the problem of attendance in a city under 20,000 inhabitants. Similar policies and procedures will work in a city of a considerable range, below and above the indicated population.

The Census

It has been found desirable, in our experience, that the census enumerator should not have too large a territory. He needs ample time to cover his census ward, and to clean up his first survey with one or more follow-up campaigns. In Owosso the census enumerators have given further service in checking the enrollment against the census. This will be explained later.

Time and care taken by the superintendent in selecting the census enumerators is not wasted. Taking the census becomes an art with practice. It is a wise policy to select such enumerators as are likely to be employed year after year. The enumerator is certain to be a success if he is interested primarily in the census and the schools, and not in his remuneration. The fees are earned quickly during the first survey. The follow-up work and checking are slow, tedious, and very poorly paid in proportion to the number of names obtained. Yet it is this very follow-up work that determines whether the census is well or poorly taken.

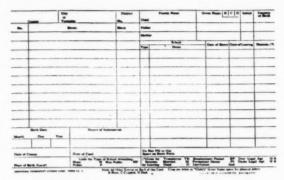
Publicity will prepare the city for the enumerators. A news item or an article signed by the superintendent of schools stating that the census is about to be taken, is very helpful. Such a news story necessarily will include a statement of the importance of the census for general school-administration purposes and for financial reasons. The legal requirements of the state may well be mentioned, because citizens are generally more ready to cooperate when they understand that local authorities are

bound by state laws.

It is a good plan to give the census enumerator an official card to reveal his identity where necessary. An amusing and annoying incident in Owosso indicated the desirability of such a plan. An enterprising book agent read that the census was about to be taken and gained admittance to many homes on the ground that she was taking the school census. She asked a few questions about the children and then made an appeal for the sale of her books. When the real enumerators came a few days later, they were sometimes denied admittance to homes because the parents claimed that the census had already been taken. A news item in the local papers warning the people of the book agent's trick caused her to leave the city and to move on to greener fields.

Checking the Census

In Owosso the enrollment is checked against the census at the time when the census is taken.



INDIVIDUAL PERMANENT CENSUS CARD The original measures 5 by 8 inches.

The same enumerators, assisted by a clerk from the superintendent's office, do this work in about two days and frequently discover some children who would otherwise be omitted from the census. By a check mark on the census list for each pupil enrolled in schools, the greater part of the census is already checked for the next school year. When school opens in September, the children in school do not constitute the immediate attendance problem. At the close of the first week of school, the teachers send in the names of all children who are in the school and for whom they hold a registration card. Most of the pupils who have moved during the summer are located by the principals through this operation.

The names of the children who still appear absent are then sent to the central office where a mimeographed list is prepared. Each teacher is given a copy of this list and is asked to check the names in her grade and the names in the grades immediately above and below her grade. At once a large portion of the missing children are accounted for, and those who remain on the list constitute a definite and immediate task for

the attendance officer.

During the summer the central office prepares a list of the children enrolled in the various parochial schools, as shown by the census cards. When the initial enrollment blanks of the parochial schools are turned in, they are checked against this census list, and the pupils unaccounted for constitute a second definite problem for the attendance officer.

Very few children now remain unaccounted for. These are perhaps not in school. The list is first scanned for children under 16 years of age, because those who are older are subject only to part-time instruction. The locating of these children constitutes a third and final task for the attendance officer, and makes the check of school enrollment against the census complete.

After the individual schools send in their enrollment lists at the close of the first week, practically all children are located by the middle of the second week so that there is a minimum loss of attendance.

School-Attendance Habits

Communities can be trained to good or poor school-attendance habits. When a community as a whole knows that children will not be excused from attending school with absolute regularity, the attendance problems become relatively easy. A definite policy limiting exemptions from school readily creates what may be called a "school-attendance-minded" town. If the policy does not vary, except for absolutely necessary individual cases, the administrative officers are relieved from a large number of useless pleas and complaints.

In Owosso the school authorities will not consider seriously any pleas like the following: 1. Father cannot find work but Johnny can.

2. I have a large family.

3. I have purchased a home on which payments are still due.

4. I have a mortgage or notes coming due. 5. Willie has a good chance for a job now and

probably will not have a like opportunity again. 6. Johnny does not like school; he is better out

of it 7. Why make Johnny go these last six weeks when he can get a job? Why not let him off now?

8. He is not learning anything.

9. My husband has left me, or I have left my husband.

While to parents the preceding reasons may seem sufficient, each individual case must be handled separately. Not one of the reasons given is basically sound for exemption from school. During the present school year only two children under 16 years of age have been exempted from school.

Prompt Enforcement

Compulsory attendance problems are simplified as the enrollment machinery functions from the day of the opening of school. When people learn that enforcement is not delayed two or three weeks pending a check of enrollment, practically everybody goes to school from the first day.

The truant officer can begin work the second day on the children entering the high school from the eighth grades. Not only is it the best place to begin, but it is the spot where most evasions of the law are likely to occur. When the district learns that this method is followed, parents who wish exemptions for their children will see the superintendent before school opens. When patrons do this, a high standard of attendance enforcement may be expected. By the time the ninth graders are checked, the lists from the entire school enrollment, as expressed above, will be ready for attention, and soon thereafter the lists from the parochial schools will be at hand. In this way enforcement becomes immediate, certain, and complete.

The development of a community attitude toward regular attendance has an effect on the pupils. For the sake of the right development of the child, the school and the school's work must be held up constantly to the child as its first and main business in life. If the child senses that the community considers this to be a fact, desirable attitudes will be built up in the child. If, however, it senses that the school gives way to the convenience of parents or teachers and to all those miscellaneous groups and agencies that wish to use the child during some part of the school day, it is inevitable that the child will reason accurately that school is not so important and that it will also give way to his wishes and convenience.

The Problem of Illness

Attendance will be actually improved if parents get the idea that the school does not want children when they are unfit for school. This idea will be further impressed if parents understand that they are neglecting their duty toward the children when they fail to keep the children in fit condition for school. The school should not be compelled to carry the danger of spreading diseases from pupils with undiagnosed skin eruptions, sore eyes, abnormal temperature, sore throat, etc. Parents should be taught to keep such children at home pending developments. They should be taught, too, that such children will recover more rapidly and be restored to regular attendance if they have medical attention, and many other children will not be threatened with illness and loss of attend-

The Internship for the Superintendency as the Intern Sees it

E. L. Tink, Director of Reference and Research, Montclair, New Jersey

The Meaning of the Internship

Internships in school administration is old in both theory and practice. The modern theory and practice of it, however, differ widely from

The idea formerly was that a man should have some small amount of training, usually on an undergraduate level, and then start out to secure his practice by a succession of jobs. He would begin as a teacher, then serve an elementary principalship, next take a high-school principalship, after that a supervisorship, possibly ending with an assistant superintendency. In these positions the value of his experience was a gamble. He was as likely to waste his time, make serious unrecognized mistakes, and acquire unsound administrative philosophy and bad administrative habits, as he was to secure experience of value. Whatever professional training he secured during this period would be taken in summer schools, or on leave of absence. He would reach a superintendency at the age of 35 or 40.

The modern theory is that a man can acquire a little experience and receive most of his professional training, which is on a graduate level, in a few years before he starts his internship under a master craftsman in superintendency. Under such a leader, he will spend two or three years in apprenticeship experiences that for value in themselves and in methods of attack, he could never have acquired by himself, even in several times as many years. If all goes well, he is expected to be ready for a superintendency of reasonable size by the time he is 30.

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A New Type of Internship

A new type of internship has been proposed for a number of years by outstanding leaders in the training of city-school administrators. These proposals, however, have not as yet met with wide acceptance, since there are today few interns in city-school systems.

Nothing has so far been written from the standpoint of the intern himself. Consequently, an article from this point of view may clarify the situation, stimulate better internship, and encourage many more such positions. Superintendents may thus have their attention called to the advantages of the internship, and acquire information regarding the qualifications and type of intern to be selected.

The writer has had the maximum amount of institutional training for city superintendents offered in any university, and has spent over one calendar year as an intern in a city-school system which had two former interns. He thus feels able to view the internship from both the institutional and the intern's point of view.

The true meaning of a city-school internship is not found in the various titles with which interns are invested. Basically, all internships have much in common, yet the intern's titles, perhaps for administrative reasons, vary widely. The titles used do not describe the relationship existing between the superintendent and intern, nor do they necessarily describe the intern's real work. An internship is never called such in official rosters. The intern may be officially referred to as "assistant or deputy superintendent," "assistant to the superintendent, "director (search," "director of reference and research," "statistician," or any one of a number of variations of the foregoing.

As experienced by the writer, an internship is essentially a plan for enabling a man with more training than experience, to short-cut by years under expert guidance, the mastery of the

essentials in administering all phases of a city-school system.

Working Arrangements for an Internship

What is the spirit behind the superintendentintern relationship? What are the working arrangements for a successful internship? These questions are best answered by a consideration of the qualifications which the intern should possess, and by a recital of the writer's experience as an intern.

A man seeking an internship should, first of all, be well trained. An untrained man cannot readily master his intern's work, because he is not acquainted with the literature of the field, or the techniques of his profession. The untrained man, without long experience, is unable to see the many activities of the superintendency in their proper relationship and perspective. He does not possess a broad historical outlook on educational movements, nor does he appreciate the philosophic meaning of the many divergent tendencies in modern education. It is, therefore, extremely difficult for him to develop a sound judgment of educational values. He is severely handicapped from the start, because he does not possess the working tools of his profession. Manifestly, no superintendent can afford to engage a succession of untrained novices as interns. Only a well-trained intern can render a superintendent enough service to justify the expense to the school system.

The writer is serving his second year as an intern in a high-class residential city of 40,000, in the New York metropolitan area. Three hundred and thirty-two well-trained teachers meet over 7,000 boys and girls in homelike and wellequipped classrooms. The central professional staff includes 18 supervisors and specialists. There is approximately \$15,000 of assessed wealth back of each school child. The citizens are proud of their school system, which is a Mecca for visiting schoolmen from all parts of the world. In many ways, however, this community is typical of the better middle-size cities of the United States. Housing conditions in a few sections are typical of the poorer sections of many cities. Foreign and colored sections rapidly increasing in size make it cosmopolitan. The school system must be adapted, therefore, to the needs of the various economic and social classes to be found in any city.

The school system is large enough so that the superintendent must have more than clerical help on administrative problems, and more help than the supervisors, principals, and assistant superintendent can give. He requires help on the problems of the educational system as a whole. There is need for more than the typical research-bureau functions of testing and classification. There is a demand for help in the emergencies that come to any superintendent. Many of the superintendent's needs have to do with administrative problems and procedures, a type of work lending itself admirably to the superintendent-intern relationship.

Selecting the Intern

For the past five years, it has been the policy of the superintendent to secure an intern known as "director of reference and research." The first was selected primarily to make certain highly important administrative researches, the second to carry on curriculum research and organization. They served two years each. The quality of these men may be judged from their present positions. While either could have gone to a superintendency, one elected to join the staff for

training superintendents in a leading teachers' college, and the other to take the principalship of two highly progressive schools in the local system where he could further pursue certain experimental work in which he had become interested.

In selecting his third intern, the superintendent was especially interested in the educational experience which he had decided the intern should acquire during the next few years.

The superintendent asked few questions regarding the candidate's professional training. This training was apparently accepted without question, since the superintendent knew that the candidate was then finishing a major course in the training of city superintendents and the work leading to the doctor's degree.

The superintendent's method in selecting his intern offers certain suggestions of value to other superintendents. Satisfied on training and experience, the superintendent spent considerable time studying the candidate in the actual environment in which the latter would have to work, were he chosen for the position. After being taken to various school buildings, the candidate was asked to express his opinion about the various classes visited, and about the soundness and desirability of the class procedures observed. He was introduced to different teachers, evidently to test his resourcefulness in meeting different types of teachers in various class situations.

He was introduced to divers members of the administrative staff. During these latter contacts, the superintendent tested the candidate's ability to defend himself against good-natured pleasantry, and joking, by relating the humor of various situations occurring during the candidate's visit. He evidently wanted to know whether the candidate could get along with people. Perhaps a number of these conversations were for the specific purpose of discovering whether the candidate could work with the superintendent in an agreeable and congenial manner. The candidate was placed in various social situations, including that of being a guest of the superintendent at a luncheon. The whole procedure was marked by a reassuring informality, frankness, kindly humor, and a most searching type of examination and appraisal.

A detailed description of the actual operation of an intership may be of value to other superintendents. The writer's experience may serve as an example.

Starting the Intern

Beginning days in any new position are all too frequently days of nervous strain. But, the beginning days in this position will be remembered not as days of trials and tribulations, but as days of adjustment under most favorable circumstances.

Reporting for work, ten days before the opening of school, the intern was advised to get acquainted with the work of his predecessors through conferences with them, and a study of the work they had been doing in the internship. No work was assigned. In fact, the intern was told not to work on any specific tasks or problems he discovered, and was repeatedly told not to worry about the fact that work was not assigned him. The superintendent prophesied that later there would be plenty of work of all types. There was.

During the ten days the intern was able to study the work of his predecessors and to confer with them, as both were located near by. These days also offered him a fine opportunity to become familiar with some of the necessary routine work of his office. Since the ensuing work was to involve contacts with all phases of the school organization, the intern, through map study and visits, became acquainted with the thirteen school plants, their equipment, immediate environs, and enrollment boundaries. His professional experience in school-building surveys, acquired in his training course, proved to be of value in this physical-plant appraisal.

Apparently the superintendent planned to allow the intern to ease into his work gradually. Shortly after the beginning of the school year and adequate introduction to the work of the school system, the superintendent began to assign certain routine pieces of work and definite responsibilities to the intern. From time to time he requested certain information concerning the school system, and discussed with him certain administrative problems facing the school system. The responsibility for the solution of some of these problems was then shared with the intern. Gradually other administrative responsibilities and problems were assigned to him. The amount of time devoted to the solution of administrative problems increased gradually throughout the year. As he became acquainted with the local situation, the discovery and analysis of administrative problems were also left to him in an increasing degree.

Scope of the Intern's Work

An intern may perform many of the actual duties of the superintendency. The comprehensiveness of an intern's duties are shown by the following facts on the writer's first year of internship. During this time he performed 212 of the 338 duties which, according to Ayer,1 are typically performed by city superintendents. Thus, in his first year, he performed in a real situation, 63 per cent of the actual duties he would later be expected to perform as superintendent. This left unperformed only about a third of the superintendent's duties, many of which could be experienced the second year.

The duties performed by the intern are not only numerous, but comprehensive in scope, being fairly evenly distributed throughout Ayer's various classifications. Of the duties listed by Ayer under "The Curriculum," the writer as an intern has actually performed 32 duties, while the typical superintendent performs only 28. However, in the case of duties listed under "The Pupils," the writer performed but 23, as against 53 performed by the typical superintendent. With an additional assignment this year, which makes him responsible for the administration of an evening school for boys and girls, the writer may reasonably be expected to perform a number of additional duties pertaining to the pupil.

All duties, of course, are not of equal value as administrative training for interns. Some duties not demanding general or professional administrative ability which should be performed by clerical assistants, are classified by Ayer as "minor" duties. The writer performs only 28 per cent as many of these minor duties as does the average superintendent. It is again fortunate that the writer's internship carries with it a relatively high performance of duties of greater importance requiring administrative ability, listed by Ayer as "major" duties. During the first year the writer performed 87 per cent as many of these major duties as did the average superintendent.

Working Conditions of the Intern

Not only are the problems and duties of an intern those of a real school situation, not only are they numerous and comprehensive in scope, not only do they demand administrative ability, but many of them must be accomplished under

SCIENTIFIC BUDGET PROCEDURE

The first essential and the basis of all efficient school organization and management is careful and scientific budget procedure. The planning of a budget is not a simple operation at any one time in the year, but rather a cycle of operations to be checked up in terms of last year's expenditures. A budget must be made in detail and justification for all needs clearly set forth. Budgets which must be approved by city councils should not be padded, but should include what the board and superintendent regard as the actual amount needed. In this way the board can defend each item of the budget.—Homer P. Shepherd, Knoxville, Tennessee.

pressure of other work and under time limits. Seldom is a superintendent able to devote a full day uninterruptedly to the solution of an educational problem. However, his problems must be solved. An intern soon discovers that he will have little cloistered seclusion in which to work. Yet, his problems must be solved as scientifically as possible, on time, and despite unavoidable interruptions and conflicting claims upon his time. In short, he learns to work under the conditions normally surrounding the superintendent.

During a typical day an intern has several problems more or less constantly before him for solution. The writer's superintendent has recently suggested that he would like to have studies of internal accounting and of unit costs for the entire school system. The organization of a permanent, continuing school census has been made the responsibility of the intern. At the same time, certain changes must be made in the accounting system, to harmonize with the establishment next year of a central supply building, anticipated growth in certain educational services, and more detailed cost-accounting requirements.

During a typical day, the writer has the administration of certain new activities resulting from his previous researches. For example, he directs the administration of a new cumulative pupil-record card, until the work can be delegated to assistants and routinized. His major time, perhaps, is given to his ever-increasing administrative responsibilities. In connection with his curriculum-revision responsibility, he works with each of seven curriculum committees. In connection with his publicity-program responsibility, he stimulates and directs school news for thirteen schools.

Other duties of a special, irregular, or "rush" nature occur intermittently throughout the writer's typical day. The intern is called upon to represent the superintendent at a county conference held at 1:30 in a neighboring city. A staff meeting which the intern attends, closes at 12:30. A principal has requested information, bibliographic help, and literature on "extracur-ricular activities." Representatives of two publishing houses have called and wish to see the "director of reference and research." An elementary supervisor wants to know where authentic information regarding the height of washbasins for kindergarten children can be secured. And, in the meantime, correspondence must be answered, and the inevitable questionnaire checked or held, until further information may be unearthed from ancient files.

At certain times of the year the typical day may be no longer typical, seasonal responsibilities such as visiting candidates for teaching positions, final preparation of the annual budget, and preparation of annual reports, requiring first attention. Without doubt, the intern is learning to do by doing.

Types of Work Done

The administrative problems confronting the intern, on the basis of the writer's experience,

may be classified, for convenience in discussion, under three heads, although there is considerable overlapping.

The first group of problems demanding the intern's attention includes "recurring routine problems." These usually recur annually, although some of them recur semiannually, or monthly. These problems when first attacked necessarily require some professional training for solution, but once solved, the resulting administrative procedures, within certain limitations, may be routinized and delegated. Agegrade studies, grade-progress studies, subjectpromotion studies, and certain various statistical studies, are illustrative of recurring routine problems. Once the method for securing the necessary data, the procedures for tabulation, and the form for graphic presentation, are fixed for these problems, the intern need spend little further effort upon them, and may safely and advisedly delegate them to his office assistants. The intern must, however, check the accuracy of the work, and continually seek better methods of interpreting and presenting the resulting material. At no time should an intern lose supervisory contact with these routinized problems. At all times he must hold himself solely responsible to the superintendent for the work he has permitted to become routinized. Ability to delegate work wisely is considered by educational authorities to be one of the most important attributes of the successful administrator. The intern receives valuable training in this field.

Strictly Professional Problems

The second group of problems facing the intern are "special problems requiring professional training." These problems, unlike the first group, seldom recur and are of such nature that they cannot be delegated to workers who are not professionally trained. Their solution frequently demands a command of the techniques of the educational research worker. Professional training as used here refers to that type of institutional training, which results in the command of specific professional techniques, the practice of basically sound and efficient financial and business management, knowledge of professional literature and sources of educational information, acquaintance with the work of the various educational experts, an understanding of the history and present significance of the many forces affecting education, and not the least a functioning and practical knowledge of the good and bad in educational theory and

Problems requiring professional training are numerous in a city of 40,000 which is beginning to feel growing pains. These problems furnish a wealth of valuable administrative experience for the intern. A few examples of the writer's actual problems of the past year, for whose solution he had to fall back upon some one or more of the various phases of his professional training, are as follows:

Establishment of cumulative sick leave

Establishment of cumulative central administrative

pupil records The foregoing problems involved knowledge of cur-

rent practices regarding pupil records and sick leave, knowledge of sources of relevant data, examination of the literature of the field, handling data by methods required in the professional training period, and use of techniques employed in personnel studies.

Scoring of local school buildings

Techniques were of primary importance in this work. Interpretation of various school organizations and classroom procedures

urriculum construction

Preparation of annual reports, descriptive of educational procedures and activities in different grade levels and subject fields.

The solution of these problems required an understanding of their philosophic meaning and present educational significance, a knowledge of the literature and specific techniques of the respective fields, and an ability to pass sound judgment on the value of the educational methods and outcomes observed.

^{1&}quot;The Duties of Public-School Administrators." Fred C. Ayer, AMERICAN SCHOOL BOARD JOURNAL. A series of nine articles, starting February, 1929. Only duties listed in six of the nine articles were available at the time of writing this article.

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Many of the specific abilities found helpful in the solution of these problems can be traced directly to training received from certain professional situations arranged by his professors, such as building surveys or general surveys of city and state educational systems. Many of the specific abilities found helpful by the writer in the solution of his problems requiring professional training cannot, however, be traced by him to specific training situations. Yet, he is convinced that many such specific abilities sprang from his professional training. He has only to look back on his lack of these specific abilities before his training period to realize that, somehow or other, during that training period, he acquired them. The ability remained, although its exact origin cannot be traced.

It is in the solution of these problems requiring professional training, that the intern can be of most help to the superintendent. Here he secures some of his most valuable administrative experience.

Personal Relations Problems

The third group of problems confronting the intern are "special problems requiring personal adaptability to situation." The use of the word "adaptability" in this heading does not imply the undesirability of adaptability in the solution of the problems under the preceding headings. Instead, the use of this word merely indicates a type of problem in which adaptability is of unusual importance. Problems in this group may occasionally be recurring. They frequently demand resourcefulness. They always require observation, a knowledge of human nature, and the exercise of common sense. For permanent solution, they practically always require professional training.

These are problems in which the human equation in administration predominates. They are problems of satisfactory relationship between human beings; boys and girls, teachers, principals, parents, building custodians, supervisors, office workers, staff members, candidates for teaching positions, board members, city officials and employees, commercial men, news representatives, taxpayers, visitors, state officials, and civic, social, religious, and outside professional groups.

Every superintendent must deal with each and all of these groups. Interns, by the same token, find their work closely related to these classes. There is not a group mentioned in the foregoing list with which the writer, as intern during the past year, has not had some problem demanding adaptability and recognition of the human factor.

Not the least important relationship with the foregoing groups has been his relation with the news representatives, in connection with all school publicity. This relationship is typical of the group of problems requiring, primarily, adaptability to situation, a willingness to deal with a local situation, as it is, with careful observation and full recognition of the human factors involved. Back of most of these problems there is need for professional training. For example, the solution of the school-publicity problem not only involved general professional training, but also specific, professional training secured from a course in educational publicity from meetings of the administrative club, and from administration luncheon discussions at the training institution. Adaptability to situations and the possession of other traits desirable in dealing with human beings, unsupported by professional training, are not enough to permit an intern to solve this class of problems satisfactorily.

Essentials for a Successful Internship

The writer's experience indicates that the internship cannot be successful in every school system, because it is not suited to all school sit-



A SOCIALIZED READING CLASS, FIRST GRADE ROOM, MADISON AVENUE SCHOOL, ATLANTIC CITY, NEW JERSEY

uations, or to all superintendents, or to all prospective school executives. For successful internship, certain definite conditions in school systems, and certain definite qualifications of superintendents and interns are required. Many school systems throughout the country, however, can meet these conditions, and so could profitably establish internships.

One of the first essentials for a successful internship is that the school system be progressive, and large enough to keep an intern engaged in administrative problems and responsibilities. A highly trained intern cannot advisedly spend his time in a nonprogressive school system or in nonadministrative work. The school system should be such that one may see the best educational theory in actual practice.

For a superintendent contemplating a successful internship, the writer's experience indicates six essentials:

First, he should be an able superintendent. There are many capable superintendents of this type. No trained intern can profitably spend his time with a mediocre superintendent. In addition, it is desirable that the superintendent be an outstanding superintendent of wide educational experience and associations, and thorough professional training. A smaller number of superintendents possess these additional attributes. The intern selected by a superintendent of this type is indeed fortunate.

Second, a superintendent must be willing to train a new man every few years. Capable interns will take positions in their own right after two or three years in an internship.

Third, a superintendent must be willing to take responsibility for all an intern does. This is true, because the intern is not a permanent member of the staff, with fixed and practically unchanging responsibilities.

Freedom to Work

Fourth, a superintendent must be willing to give an intern freedom to work out problems scientifically. Neither the superintendent, nor the intern, can profitably let the intern's work become that of a mere professional printer's devil for the superintendent. Observation alone of the superintendent's personal and social methods of solving administrative problems will no more fit a man to do the work of a superintendent than will merely watching a good aviator fit a wholly inexperienced man to pilot a plane.

Fifth, a superintendent must be willing to

give an intern complete run of the school system. Blanket instruction to the intern to gather all information of value in the administering of a school system is an excellent method of accomplishing this situation. Both intern and superintendent profit when the intern has access to the entire school system. Without the run of the school system, an intern's experience would be limited and not representative of a superintendent's work.

Sixth, a superintendent must be ready to accept the intern as a personal assistant or junior colleague. The superintendent should be available at all times to the intern without appointment or formality. The superintendent should, as occasion arises, discuss with the intern the significance and value of current educational movements, and the work of leading superintendents and educators. He should arrange opportunities for real contacts with leading school executives and educators. In the close interplay between superintendent and intern, the intern contributes in three ways:

First, he becomes aware of the superintendent's problems and is alert for pertinent facts, sources of aid, and reactions within the school system.

Second, he contributes the newer philosophy and techniques which he has secured from the more recent training.

Third, he becomes a sparring partner for the superintendent on educational articles and formal speeches.

There are likewise certain essentials, beyond training and experience, which the writer's experience indicates an intern must have if he is to be successful:

Some Essentials the Intern Must Possess

First, he must be willing to work two or three years in the internship. A superintendent cannot afford time to develop a new intern yearly.

Second, he must be able to produce uniformly high-grade work, if he is to be of value to the superintendent. Otherwise, the superintendent is not justified in this expenditure of public money. In fact, one prominent professor of educational administration, engaged in the training of city superintendents, states that "men of unusual ability only will be successful in internship." Certainly, the intern must be willing, and must endeavor to give the superintendent the best work of which he is capable.

Third, he must have the attitude of "working

(Concluded on Page 141)

The Duties of Public-School Administrators-IX

Fred C. Ayer, Professor of Educational Administration, The University of Texas

The series of articles, of which the present is the ninth, has been devoted to an analytical discussion of the duties which pertain to public-school administration. Within the general field, detailed treatments have been made in turn of the special fields of educational administration known as general control, executive management, business management, personnel management, the management of pupils, the curriculum, and special activities. The following article continues this series of articles with a detailed treatment of the duties of principals and superintendents in connection with the administration of instruction.

XI. INSTRUCTION

The rapid rise of supervision as a professional service on the part of public-school administrators has greatly increased the number and scope of the duties which superintendents and principals perform in connection with the improvement of instruction. It is very difficult to draw a satisfactory line of demarcation between the duties of administrators which pertain to instruction and those which pertain to other fields of administrative activity. As a matter of fact, the concept of professional supervision has expanded so greatly in recent years that it now reaches out into practically every aspect of administration. Limited at first to matters directly associated with classroom teaching, supervision has been extended to involve the entire field of learning and teaching conditions. Approximately one fourth of the list of 1,000 duties which constitute the entire range of administrative duties might well be classified as supervisory duties, and many of the others bear more or less directly upon instructional conditions. The set of duties which are considered in the present article bear somewhat more directly upon instruction than those which have been classified elsewhere and pertain particularly to the immediate activities associated with teaching, testing, and supervision.

Notwithstanding the above limitation in scope there are 106 administrative duties which have been included in the present survey of the work of public-school administrators as it relates to instruction. These 106 duties have been classified as follows:

			Duties
1.	Teaching and classroom	management	18
2.	Administration of tests.		25
3.	Application of test resu	lts	14
	Personnel supervision .		
	Classroom supervision .		

The 106 duties indicated above constitute a field of service which is thought by many authorities to lead all others in administrative importance. How large a part these particular duties have played in the actual work of principals and superintendents will become apparent as we examine the several subordinate groups of duties in greater detail.

1. Teaching and Classroom Management Eighteen different administrative duties which pertain directly to the immediate activities of classroom teaching and management have been combined in this study and appear here, together with certain statistical data, as Table XL. As in preceding tables, the duties listed in Table XL are ranked in order according to the percentages of superintendents performing them during the year covered by this investigation. Thus the duty, Inspect rooms as to seating arrangement, which was performed by the largest number of superintendents (77 per cent) appears first in Table XL and the duty, Teach class in elementary school regularly, which was performed by the smallest number of superin-

TABLE XL. ADMINISTRATIVE DUTIES PERTAINING TO TEACHING AND CLASSROOM MANAGEMENT

(Frequencies are d for daily, w for weekly, m for monthly, y for yearly, y^2 for two times a year, etc. Values are 1 for primary, 2 for average, 3 for minor, and 0 for no importance.)

		Adm	Percent	ning	Median Fre-		
	DUTY	Supt.	Gen. Prin.	H. S. Prin.	E. S. Prin.	quency Supt.	Median Value
1.	Inspect rooms as to seating arrangement	77	91	61	71	v*	2
2.	Teach subject in high school regularly	71	94	75	2	d	3
3.	Confer with pupils on make-up work	69	83	77	59	992	3
4.	Study arrangement of materials and equipment	66	77	58	61	992	2
5.	Instruct pupils in methods of study	56	77	70	63	991	2
6.	Inspect routine of passing materials, moving to						
	blackboard, etc	55	69	41	54	991	3
7.	Provide teachers' list of room materials, books, etc.	51	51	32	32	v	2
8.	Act as substitute teacher in high school	46	42	55	2	y*	3
9.	Distribute classroom materials	40	46	38	49	991	0*
10.	Teach students how to use new books	37	54	41	59	y ²	3
11.	Distribute laboratory materials	34	43	32	10	20	3
12.		30	42	28	10	702	3
13.	Act as substitute teacher in elementary school	29	35	3	24	y3	3
14.		27	52	29	49	291	3
15.		27	42	21	37	992	3
16.	Adjust desks for individual pupils	19	35	23	46	y2	0*
17.		14	23	17	27	y ²	2
18.	Teach class in elementary school regularly	4	5	0	71	w	0*
	Average	42	53	39	40		
	*More than one half of the judges assigned this val	lue.					

tendents (4 per cent) appears last. Besides the percentages listed for superintendents, Table XL also exhibits similar percentages of performance on the part of general (combined high and elementary) principals, high-school principals, and elementary-school principals. Frequencies of performance vary considerably both in percentage and rank among these four groups. The next-to-the-last column in Table XL gives the median frequencies with which the respective duties were performed during the year by the superintendents who did perform them, and the final column exhibits the median ratings as to administrative values which were assigned to the several duties by 50 experienced administrators. Thus the correct reading for the first duty listed in Table XL is: The duty, Inspect rooms as to teaching arrangement, was performed by 77 per cent of the superintendents surveyed, by 91 per cent of the general principals, by 61 per cent of the high-school principals, and by 71 per cent of the elementary-school principals. The median superintendent of the 77 per cent performed this duty 6 times during the year, and the duty was judged to be of second or average importance.

The duties listed in Table XL cover a wide range of classroom activities and the high percentages of performance indicate that principals and superintendents give large amounts of time to duties which primarily belong to classroom teachers. A fact of great significance revealed in Table XL is the large number of principals and superintendents who teach regularly. Seventy-one per cent of the superintendents teach regularly in high school and 4 per cent of them teach regularly in the elementary school; 97 per cent of the general principals teach regularly in the high school and 5 per cent of them teach in the elementary school; 75 per cent of the high-

TABLE XLI. ADMINISTRATIVE DUTIES PERTAINING TO THE ADMINISTRATION OF TESTS

(Tabular arrangement and symbols as in Table XL.)

		Percent		Median		
********	Adm	inistrator			Fre-	
DUTY	Supt.	Gen. Prin.	H. S. Prin.	E.S. Prin.	quency Supt.	Median Value
1. Study test procedure	72	74	55	61	y ³	1*
2. Assemble and study sample tests	69	69	55	46	y^2	1*
3. Keep file of sample tests	68	66	50	56	y	1*
4. Explain purpose of testing program	66	64	51	51	y	1*
5. Help teachers improve written examinations	66	62	63	44	v ²	1*
6. Arrange examination schedule	66	85	81	49	y2	2
7. Organize testing program	65	54	46	54	y	1*
8. Train teachers to score and tabulate tests	62	63	49	49	y	1*
9. Train teachers to give tests	56	60	42	44	y	1*
10. Supervise giving of test	56	75	57	54	y2	2
1. Grade examination papers	54	82	60	51	y*	0*
12. Administer group test	51	66	63	60	y2	2
13. Administer final examinations	49	75	51	44	y2	3
4. Score test papers	48	75	51	56	v3	3*
15. Explain practice tests to teachers	41	48	26	29	y2	1*
16. Administer individual test	36	42	24	45	y8	2
17. Report results to publishers of tests or test bureau.	34	22	19	17	y2	2
18. Train clerical help to score and tabulate tests	33	20	19	15	y	1*
19. Prepare general examination	33	57	35	32	y^2	3
20. Supervise and check work of scorers	33	39	21	24	y2	2
21. Construct special test	32	26	27	37	y2	2
22. Administer state and county examinations	26	48	6	15	v	2
23. Select exemptions from examinations	24	42	35	20	y	3
24. Administer entrance examinations	24	17	13	7	y	2
25. Serve on county examining board	10	2	. 2	5	y	2
Average	47	53	40	39		
*More than one half of the judges assigned this va	lue.					

school principals teach regularly in the high schools, but none teaches in an elementary school; and 71 per cent of the elementaryschool principals teach regularly in the elementary school and 2 per cent of them teach in the high school. Besides these regular teaching duties, all groups serve frequently as substitute teachers. Evidence which was presented in a previous article1 shows that 25 per cent of the entire group of administrators do no teaching; 35 per cent teach from 1 to 10 hours per week 28 per cent teach from 11 to 20 hours per week; and 12 per cent teach 21 or more hours per week. The great majority of the school executives surveyed in the present study were in administrative charge of less than 1,000 pupils, but it is quite apparent that in schools of this size, principals and superintendents devote im-

portant amounts of time to regular teaching. On the general average, there is comparatively little difference in the relative amounts of performance on the part of the four groups of executives concerned. Compared with other types of administrative duties the high-school and elementary-school principals perform greater numbers of the duties which pertain to teaching and classroom management. Superintendents, general principals, and high-school principals teach much more commonly in the high school than in the elementary school, and quite naturally the elementary-school principals teach most commonly in the elementary school. Most of the variations exhibited in Table XL reflect this difference.

Inasmuch as the great majority of school executives represented in Table XL teach regularly, the facts exhibited therein cannot be taken to represent the activities of those principals and superintendents who do not teach. According to the judgment expressed by experienced administrators and which appear in the final column of Table XL, almost all of the duties listed are considered to be of little or no direct administrative importance, particularly from the point of view of a superintendent performing them. Four only are considered of average importance and none is rated as being of primary administrative importance. It should be added that although the average values assigned were low, the 50 judges differed very markedly in their individual ratings of the various duties. This was very possibly due to failure on the part of some to discriminate between administrative values and general educational values.

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2. Administration of Tests

The various duties which public-school executives perform in connection with the testing program are exhibited in Table XLI. It is the general concensus of opinion on the part of public-school superintendents and professors of educational administration, that more progress in administrative research has been made in the field of educational tests and measurements than in any other. The wide array of testing duties and the frequent high performance per-centages exhibited in Table XLI offer ample evidence that the progress of educational research has resulted in widespread practical application. Table XLI, which is arranged mechanically on the same plan as preceding tables, includes 25 commonly performed duties, the large majority of which would have been unrecognized as public school duties two decades ago.

It is significant that the duty, Study test procedure, is the most commonly performed of all the testing duties listed, and that it leads for all types of administrators. This duty is closely followed by four others, the nature of which indicates that public-school executives have been very generally interested in organizing testing programs. These four duties are: Assemble and study sample tests; Keep file of sample tests; TABLE XLII. ADMINISTRATIVE DUTIES PERTAINING TO THE INTERPRETATION OF TESTS

(Tabular arrangement and symbols as in Table XL.)

		Adm	Percent	ning	Median Fre-		
	DUTY	Supt.	Gen. Prin.	H. S. Prin.	E. S. Prin.	quency Supt.	Median Value
1.	Make statistical analysis of test results	55	49	42	44	v2	1*
2.	Study teaching efficiency as shown by test results	49	48	34	46	v2	1*
3.	Compute I.Q.'s or similar relations	47	55	51	46	v	2
4.	Make illustrative graphs of test results	44	. 45	27	34	v^2	1*
5.	Explain remedial devices to teachers	44	52	32	44	v2	1*
6.	Classify scores	43	49	31	37	y2	2
7.	Study types of errors	42	49	32	46	y^2	1*
8.	Assemble list of remedial devices	41	48	28	39	y2	1*
9.	Make comparative study of results in other cities	40	34	29	34	y2	1*
10.	Reclassify pupils on basis of testing	35	34	29	34	y^2	1*
11.	Arrange special and individual instruction	34	46	35	39	v2	2*
12.	Interview pupils about test scores	28	45	30	29	V.6	2
13.		18	20	16	24	v	2
14.	Determine weekly grade averages	10	14	9	17	w	3
	Average	. 38	42	30	37		
	*More than one half of the judges assigned this val	lue.					

Explain purpose of testing program; and Help teachers improve written examinations. Sixtyfive per cent of the superintendents definitely organized a testing program during the year, and numerous specific contributory duties appear in Table XL which indicate that both superintendents and principals took a direct and leading part in the administration of tests.

The general principals, who for the most part represent something of a combination of principal and superintendent, lead all the other groups in general testing activity. The superintendents are more active than either high-school or elementary-school principals. The latter two, however, are very definitely and about equally involved in the testing program. The highschool principals as a group deal somewhat more with examinations; the elementary-school principals somewhat more with tests. The superintendents lead the principals generally in studying, devising, and reporting tests and in training teachers and clerks to give or score tests, but are somewhat less commonly active in the immediate administration and scoring of tests and examinations.

While there is a very general participation by all four groups of public-school administrators in the various aspects of testing, it should be noted that there are no duties whatever which average in the ninety percentiles and only three cases in which the performance percentiles for any group run into the eighties. Under the most favorable interpretation, it is apparent that a large block, fully 25 per cent, of public-school administrators had practically nothing at all to do with standardized testing and measurement. Superintendents who did engage in testing per-

formed the 18 duties on a yearly or part-yearly basis, the majority of duties being performed two times per year.

A conspicuously large number of these duties were rated as having primary administrative importance. Only one duty, Grade examination papers, was judged to be without administrative significance. Testing duties were generally rated higher than examination duties. Duties of primary importance for the most part were more commonly performed than duties with less administrative significance, the notable exception being the grading of examination papers. In distinction from the duties pertaining to teaching and classroom management, the 50 judges were in fairly general agreement with respect to the values of different testing duties. The greatest difference of opinion existed with reference to the duty, Administer individual test.

3. Interpretation of Tests

The most important part of a testing program is the use that is made of the test results. There are, no doubt, certain values to be attained by the mere giving of standardized tests, but the chief values accrue from the remedial measures and better systems of pupil classification that are made possible by the proper interpretation of the test results. The duties which public-school administrators perform of this type are shown in Table XLII.

An examination of the data revealed in Table XLII, bring out the fact that public-school administrators do not interpret or apply the results of educational tests as commonly as they administer them. For example, while 65 per cent (Table XLI) of all superintendents organ-

TABLE XLIII. ADMINISTRATIVE DUTIES PERTAINING TO PERSONAL SUPERVISION (Tabular arrangement and symbols as in Table XL.)

		Adm	Percent	Median Fre-			
	DUTY	Gen. H. S. E. S. Supt. Prin. Prin. Prin.		quency Supt.	Median Value		
1.	Hold conferences with individual teacher	92	95	85	85	w	1*
2.	Hold group conference	92	86	86	85	996	1*
3.	Conduct teachers' meetings	86	94	87	85	991	1*
4.	Plan outline of teacher-meeting topics	73 .	75	70	59	995	1*
5.	Consult principal with reference to his work	71	15	5	11	992 2	1*
6.	Prepare plan of supervision	55	62	63	49	v	1*
7.	Check supervisory results	48	51	48	41	y4	1*
8.	Inspect principal's office and building procedure	46	18	22	22	991	1*
9.	Arrange for teacher visitation in outside schools	45	42	35	24	y	1*
10.	Keep a record of conferences	42	48	37	39	991	1*
11.	Rate principals and supervisors	41	12	9	15	y	1*
12.	Send out advance brief of topics	40	31	42	24	991	2*
13.	Have teacher report on observations	40	51	36	37	y2	1*
14.		36	46	46	37	v	1*
15.	Arrange for teacher visitation in local schools	36	31	23	41	y^2	1*
16.	Serve as principal	35	100	100	100	v8	2
17.		33	18	26	37	2912	1*
18.	Plan meetings of supervisory staff	27	8	21	10	991	1*
19.		26	11	21	17	998	1*
20.		24	9	21	10	991	1*
	Average	49	45	40	41		
	*More than one half of the judges assigned this valu	e.					

See AMERICAN SCHOOL BOARD JOURNAL, February 1929,

TABLE XLIV. ADMINISTRATIVE DUTIES PERTAINING TO THE SUPERVISION OF TEACHING

(Tabular arrangement and symbols as in Table XL.)

		Adm	Percent inistrator	ning	Median Fre-		
	DUTY	Supt.	Gen. Prin.	H. S. Prin.	E. S. Prin.	quency Supt.	Median Value
1.	Observe teacher's classroom procedure	91	96	87	81	w	1*
2.	Discuss aims of teaching with teachers	89	87	84	59	991	1*
3.		82	86	77	67	w	1*
4.	Help teachers provide for individual differences	77	82	71	67	276	2
5.		69	69	58	66	991	2
6.	Suggest desirable changes in ways of assigning						
	lessons	69	66	50	61	993	2
7.	Show teachers how to achieve aims	68	73	68	67	991	1*
8	Assist teachers find materials	68	64	63	61	993	2
0	Look over lesson plans of teachers	67	59	45	54	771	2
10	Show teachers how to guide pupils into purposeful						
10.	activities	64	69	63	59	272	2
11	Suggest improved special devices	57	57	45	49	975	2
12.	m	55	59	43	37	991	2
13.		54	62	51	54	20	2
	Suggest how to conduct various types of lessons		0.0	0.			
14.	(e.g., drill)	54	62	41	56	992	2
15	Help teachers plan projects	53	54	39	54	272	2
16.		43	51	35	41	v^2	1*
	Make a study of pupils' study habits	41	54	38	37	m	2
10	Arrange for demonstration lesson	39	40	21	44	v3	1*
10.	Make a list of changes in methods to be sought	38	35	24	22	m	
20.		34	42	22	32	221	2 2
21.		34	45	27	37	v2	2
	Give instructions how to conduct short drives for	0 4	40	~ '	0,		~
22.	mastery	32	32	28	32	292	2
22	Suggest plan of pupil individual progress	29	32	19	37	v ³	2
24.		26	29	17	44	y ²	2
25.		24	31	15	17	y	2
		23	34	23	15	y^2	2
26.		22	26	22	27	ys	2
27.		13	11	5	17	y ²	2
28.	Supervise work of private teachers	4	5	3	2	v ²	3
49.	Supervise work or private teachers					y	3
	Average	49	52	41	45		
	*More than one half of the judges assigned this va	lue.					

ized a testing program during the year of this study, only 55 per cent (Table XLII) made a statistical analysis of the test results. On the other hand, the number of superintendents who assembled lists of remedial devices (41 per cent), who made comparative studies of results in other cities (40 per cent), who reclassified pupils (35 per cent), and who arranged special and individual instruction (34 per cent), considering the type of study, is commendably high.

Elementary-school principals on the whole give more attention to educational testing than do high-school principals. This is particularly true with reference to the applied aspects of testing. For example, 39 per cent of the elementary-school principals performed the duty, Assemble list of remedial devices, as compared to 28 per cent of the high-school principals.

With the exception of the least commonly performed duty, *Determine weekly grade averages*, all of the duties listed in Table XLII were rated either primary or average in administrative importance, and with the same exception all were performed on a yearly or a part-yearly basis. Although the facts revealed in Table XLII indicate a fairly widespread activity on the part of school administrators in the practical application of test results, it is equally important to note that fully 50 per cent took no part whatever.

4. Personnel Supervision

We now approach a field of supervisory activity which involves various direct attempts on the part of administrative officers to improve instruction through personal contacts with members of the educational staff. These duties, which are exhibited here in Table XLIII, are very closely related to those which appear in the following section on the supervision of teaching. They are classified separately, largely for convenience in discussion. Table XLIII contains 20 different personnel duties, all of which are fairly popular with public-school executives. They vary in popularity from the duty, *Hold conference with individual teacher*, which was performed by 92 per cent of the superintend-

ents, to the duty, *Direct meetings of supervisory* staff, which was performed by 24 per cent of the superintendents.

There is considerable variation among the several groups of administrators concerned as to the numbers performing the various individ-

ual duties listed. The very nature of two of the duties: Consult principal with reference to his work and Serve as Principal, favors radical differences in performance between superintendents and principals. On the other hand, many duties involve both superintendents and principals. They are, for example, very commonly engaged in the planning and conduct of teachers' meetings, but while something like 90 per cent of all administrators conduct teachers' meetings, less than 75 per cent plan outlines of teachermeeting topics, and only about 40 per cent send out advance briefs of topics.

From the point of view of administrative value, the duties which pertain to personnel supervision stand extremely high. Every duty but two in the entire list was rated as being of primary importance by the 50 judges who voted upon them. The judges, moreover, very generally were closely agreed as to these high values. Considering the high values placed upon the performance of these duties, the percentages of administrators performing many of them are comparatively low. About six out of ten administrators prepare plans of supervision, approximately five out of ten check supervisory results, and about four out of ten set up definite supervisory objectives. Forty-five per cent of the superintendents investigated arrange to have teachers visit in outside schools; 36 per cent arrange for teacher visitations in local schools. There are many individual facts of special interest revealed in Table XLIII, such as the fact that 42 per cent of the superintendents keep a record of conferences, and the fact that 41 per cent rate principals and supervisors, but the limitations of space prevent further detailed comment.

5. Supervision of Teaching

Finally, there is a long list of duties which public-school administrators perform in the direct supervision of teaching. This set of duties

(Concluded on Page 141)

Economies Within the Power of School Directors

"When one speaks of economy, the saving of money is the first thing that comes to mind, but there are other economies that are just as important. The broader meaning should be applied in the use of the term, although all economies may be measured in dollars and cents," said E. R. Bliss, a school director of Greeley, Colorado, in a recent public address.

"I believe that competition," he continued, "is the cause of more misuse of funds than any other one thing. What may be necessary and therefore economical for one district may be rank extravagance for another. What may be highly desirable may be beyond the ability of the district to afford.

"It is hardly necessary to state that cost of education has risen faster than other living costs and faster than wages and incomes seem to justify. As secretary of our district some twenty years ago, I recall that our cost per pupil enrolled in the school was \$4 per month. This same district now has an enrollment cost of \$9 per month. It is one of the most carefully administered districts in the county, yet in spite of this, the expense has more than doubled. In planning economies, it is necessary to analyze the needs of the school in order to see what has caused the great increase in costs.

"Salaries have increased on an average of 50 per cent to 75 per cent since the war, and materials for repairs and upkeep about 50 per cent, but school costs are more than doubled. Why? Each district must answer for itself. Perhaps it is a new building or addition built by an issue of long-time bonds that are drawing interest and before paid, the building will have cost twice the original contract price.

"As to certain economies within the school

which would not only save money, but help with the teaching, is one to permit teachers to combine classes where possible. Most schools — I speak of third-class district schools — can combine the seventh and eighth grades on a two-year plan. Other classes could be combined where a subject is taught throughout two or three years.

"Inability to fill classes is another cause of high costs. City schools have a low teaching cost per pupil because classes can be made to approach a maximum in size. Reducing the number of subjects would help in this also. Free transportation of pupils is expensive and I could never bring myself to believe that its cost should be borne by a tax on property, but ts a just charge against the family."

He summarizes his suggestions for economy in the following language:

1. Refusing to compete with other districts for the gratification of pride.

2. Carefully analyzing need and ability of taxpayers to support the school program.

3. Avoiding issuance of bonds where possible.4. Adjusting salaries to value of service.

5. Working for more sane laws.

6. Remembering a teaching certificate does not guarantee teaching ability.

Avoiding too many subjects on the curriculum.

8. Filling classes.

Questioning advisability of free transportation.

10. Consolidation only after full consideration of costs and benefits are carefully weighed. Finally, remember that the school board must be ultraconservative or school costs will rapidly increase.

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FRONT VIEW OF THE JAMESTOWN SCHOOL-ADMINISTRATION BUILDING

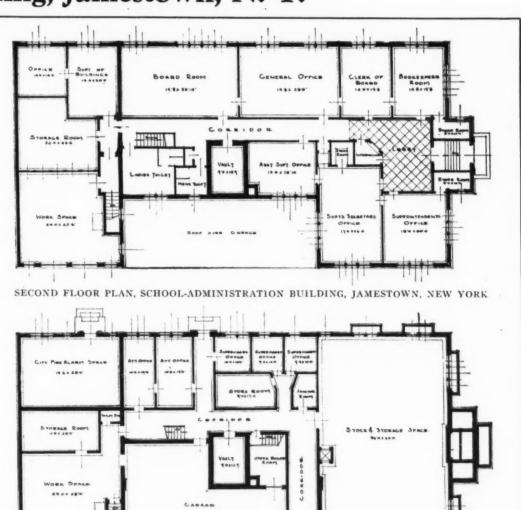
The Jamestown School-Administration Building, Jamestown, N. Y.

The desire for greater centralization, improved efficiency, and convenience, has caused boards of education in recent years to consider seriously the problem of central administration buildings for the board-of-education offices and for the executive staff of the school system. Almost without exception, school authorities who have enjoyed the benefits of a well-planned and carefully regulated central administration building have spoken enthusiastically of its advantages.

While the large cities have led in the movement, some of the most interesting and useful school-administration buildings have been erected in small and medium-size cities. As a rule, it has been possible here to put under one roof, everyone connected with the supervision and direction of the schools. A typical building of this kind is the new administration building at Jamestown, New York.

The building is a two-story structure of brick, concrete, and wood construction, planned to serve the immediate needs of the school system and, in addition, to permit of expansion in the future. The building is so located that the front entrance gives access to the general offices, which are in reality on the second floor. The greater amount of space on the ground floor is occupied by a large stock and storage room for school supplies and equipment. There are three small offices for supervisors and two offices for the attendance department. The rear provides space for a five-car garage, for the trucks and passenger automobiles belonging to the school system. An additional workroom, a small storage room, and a separate room for the city firealarm system occupy the balance of the ground floor. These latter rooms will permit of expansion in the future.

On the first floor there is on the one side, a suite of offices for the business department of the school system. These offices include a room for the bookkeepers and clerks, and for Frederick P. Rogers, business manager of the school system. A large general office serves for the



FIRST-FLOOR PLAN, SCHOOL-ADMINISTRATION BUILDING, JAMESTOWN, NEW YORK



INTERIOR VIEWS OF THE SCHOOL-ADMINISTRATION BUILDING, JAMESTOWN, NEW YORK
TOP, Superintendent M. J. Fletcher's Office and Clerk F. P. Rogers' Office; MIDDLE, Board of Education Room and the Superintendent's Secretary's Office;
BOTTOM, Supply Storeroom and Main Lobby of the Building.

clerks who keep the financial and pupil-accounting records, and who handle the school-department clerical work. The board-of-education room is a large formal room that serves for various committee and other group meetings. Two offices for the superintendent of school buildings and two storage or workrooms are at the rear of the building.

the rear of the building.

The superintendents' suite includes a large private office for Dr. M. J. Fletcher, a general office for the secretary and clerk of the superintendent, and a smaller office for the assistant superintendent.

A vault on the ground floor and a second vault on the first floor, are provided for permanent records. There are toilet rooms and space for the janitor, etc.

The building has been planned with due regard for the convenience and efficiency of the offices and also for the convenience of the public. An information booth adjoining the main lobby is occupied by a clerk, who acts as telephone operator, information clerk, and general utility.

The building has been constructed and fitted

with the idea of economy and long service as the main factors for the selection of materials. The exterior walls are faced with buff brick and trimmed with limestone. The corridors have floors of rubber tile, cement washboards, and caen-stone wainscoting. The walls and ceilings are plastered. The several rooms have hard maple floors and hardwood trim. The basement floors are concrete and the various fittings, stock bins, cases, and other furniture are of steel and other fireproof materials.

(Concluded on Page 144)

Budget Your School System Out of the Hole

Wayne Soper, Research Associate, New York State Education Department, Albany

There is nothing significant in the fact that school finance has not always adhered to sound business principles. School officials have perennially allowed deficits to be perpetrated on their communities, because they have been able to call upon the taxpayers to erase those deficits. School executives, in particular, have been infrequently guilty of fostering educational programs of questionable value, simply because they have been immune from a check-up on results. But, business cannot cover losses by a call upon the taxpayer. Earnings and stoppage of waste are the two potent factors in obliterating business losses. Quite frequently, with normal, or even decreased earnings, a business executive has been able to pull his company out of the hole. How he does this is a variant story from place to place, differing in many minor details, but containing a core of business principles quite constant. One element of that core is the operating budget of the business.

When the manufacturer of a well-known automobile recently realized that gruelling competition was decreasing the stock dividends of his company, he refused to speed up production, because he also realized that the market was surfeited with cars, and to produce and sell more cars, would in the end cost more than it would pay. Earnings, therefore, were not looked to as a source of profit. This executive deduced that profits must come from within, by reducing waste and increasing the efficiency of the plant. He discontinued an expensive branch office in New York City, removing it to the home office where rentals were much less, and office force sufficient to maintain both. Plant and sales forces were carefully pruned of deadwood, until every department was able to show commensurate returns for what it was spending. Dividends came back. This business executive pulled his company out of the hole, by getting down into the hole where profits were disappearing and stopping the leaks. His action was necessary after a period of extravagant expansion, due to a desire to keep pace with public demand after the world war. He budgeted himself out, rather than earned the way out, through more

The reason so many public-school systems do not operate on a budget plan, and why so many that do, are guilty of unbusinesslike principles, is that conditions have not heretofore compelled them to do otherwise. While the schools of the nation have always had to contest for the funds needed to run them, the public has been generous in its accounting demands. But, a more intelligent taxpaying body, and an increasingly larger tax bill, both have compelled school officials in all but the very small schools to give heed to careful planning of finances. Were it not certain that school children would be the sufferers, school officials in some localities should be advised by the taxpayers that increased revenues for the schools will not be forthcoming, until it can be shown that the educational dollar is one hundred cents well spent. This is not saying that the head of the schools should be expected to compute the product of his great institution in dollar terms. But, it is expecting him to use the vast store of information now available, whereby to run the business of his school with businesslike principles. It is a sad commentary on American education when school children are deprived of some of the opportunities meant for them, simply for the reason that pennies of the school dollar pass through the slot without operating the machinery. This condition prevails, because someone with lack of training, or with impoverished interest, has jammed the machine with a slug

of sixteenth-century finance. There are instances where school children have been forced to get along with insufficient supplies, while a large surplus of funds has lain unused in the "upkeep of buildings" account. Many schoolrooms now inadequately equipped could be well equipped, if interest charges on inefficiently managed debt service did not consume an unwarranted share of the revenues.

Analyzing Expenditures

One salient benefit of budgeting is that it provides an opportunity for analyzing the financial aspects relating to revenues and expenditures. It is easy to detect the weaknesses of a financial structure, if a detailed statement of proposed commitments based upon past experience and future outlook lies before one. Like businesses, school systems have habits. While these habits are essential to a continuance of existence, many of them become wasteful. Practices once necessary to a proper functioning of educational processes have, in many instances, become decadent. If they cannot now be justified, they should be discarded. The process of budgeting is an excellent device for clearing the schools of wasteful practices. The school executive who prepares the budget for his board of education cannot long deceive himself and his board that plant-operation costs are average with those of comparable systems, when the very figures he sets down belie his arguments.

A well-planned method of budgetary control is essential in any school system which has grown beyond the point where one person keeps all the details under his observation. Since the school executive has many matters to engage his attention, besides those relating to finance, the school system does not need to be large to demand budgetmaking.

Fairness to Departments Assured Through Budgeting

Another thing that school officials learn from business budgetary procedure is that departmental allowances cannot be made by guess. Business executives have discovered through budgeting that departments once considered of minor importance, because of insignificant appropriations for functioning, have been the backbone of the business. Increased appropriations have doubled and trebled the returns from such departments. One patent illustration is the department of research in many industrial organizations. Without a preplanned budget, research laboratories took what they could get for experimentation. Budgeting has revealed the ridiculously small amount allowed such departments for their vital services, which has been one of the causes of increased appropriations for research.

The same revelations have occurred in school systems. It is not a secret that some high-school departments have in the past secured large allowances in the budget of the school system, simply through personal favor and political maneuvering. A superintendent who, in his earlier experience, has been a science teacher, is prone to favor the science department. More particularly is this true, if the science department is headed by a covetous individual, who thinks his subjects are the core of the curriculum. A school head who has been a director of athletics, or whose hobby is sports, may unwittingly approve large expenditures for gymnasium, playground, and track apparatus, while elementary teachers struggle along with insufficient equipment in their classrooms.

It is at this point that the budget exposes

these glaring inequalities and, in the hands of a fair-minded executive, improves conditions. When per-pupil costs in history are higher than for English in the same building, with identical class size and other constant factors, there is evidence that the history teachers are getting the better of the bargain either in salary, or equipment, or both. Hand-to-mouth financing of the school program does not reveal such things; but the budget, if properly set up, will uncover them. Nothing is more discouraging to teachers of one department than to feel that their work is less appreciated than the services of those in other departments. Nothing sooner weakens personnel morale than the suspicion that some departments of the school are getting more recognition than others. It is the duty of the executive to see that equity prevails. He cannot do this successfully unless he budgets his finances.

Locating Weak Spots in the Budget

The experienced banker, or analyst can, with comparative ease, detect weaknesses in the financial structure of a business by a careful examination of the periodic statements issued by that business. However, this one thing must be kept in mind, no analyst can determine the condition of a business from an examination of its balance sheet, unless he knows that all items follow a prescribed classification of accounting. If the statement has juggled figures, his only recourse is to go to the original records. A showing of low overhead, for example, may be made by charging some items of general control to another classification.

While the school budget is not designed to make profit out of funds used, it should be built to assure the community the largest possible educational return. Weak spots in a school budget can be uncovered quite readily, if all items have been classified according to a uniform accounting scheme. Such being the case, it can readily be determined if "general control," "operation," or "maintenance" are consuming too large a per cent of budgetary appropriations, compared with other school systems of similar conditions. But, comparison of major budget divisions with those of comparable school systems, is open to many fallacies. No rule can be laid down as to just what percentage of the total budget should be devoted to each major classification. It is evident that 'operation" will be lower in southern than in northern localities. A school system which houses its children in old buildings, heated by obsolete equipment, and in general provided with little or no modern appliances will, of necessity, expend more for both "operation" and "maintenance" than will a system boasting many new, modernly equipped buildings. On the other hand, the latter system will undoubtedly have a much higher debt-service charge. Per-pupil instructional costs may be identical in two systems, because of different plans of organization, but the amounts appropriated and expended for "instruction" may differ widely.

Differences in Charging Items in the Budget

The following illustrates why per cents allotted to the character classifications of budgets are not reliable guides in making comparisons. Only a few items are necessary to show the diversity of practice in these two school systems.

It is clear that neither system has classified all of the above-listed items properly. Neither has followed consistently the best accounting practice. A casual glance will reveal why System A appropriates nearly 7 per cent of its budget

Budget items	School System	School System
	Charged them to	Charged them to
Chief engineer		
(salary)	Operation	General control
Attendance service	General control	Coördinate activ- ities
Librarian (salary)	Instruction	Auxiliary agencies
Research office	General control	Instruction
Athletics	Fixed charges	Auxiliary agencies
Watchman	General control	Operation
Commencement	Instruction	General control
Public relations	General control	Auxiliary agencies
Community center	General control	Auxiliary agencies

to general control, while system X devotes less than 4 per cent. Carrying the illustration further, the per cents allotted to the seven character classifications of the "current expenditures" budget in each of the above-mentioned cities, together with the averages for 35 other comparable cities,1 are shown below.

Character Divisions of Budget	System A Per Cent	Aver. 35 Cities Per Cent	System X Per Cent
General control	6.8	3.7	3.9
Instruction	75.7	76.9	75.9
Operation	8.9	9.6	8.7
Maintenance	5.0	5.3	6.1
Coördinate activities	.9	1.1	1.3
Auxiliary agencies	.5	1.5	. 2.3
Fixed charges	2.2	1.9	1.8
	100-	100	100

A superficial glance at the per cents above elicits the remark that System A is spending far too much for overhead (general control), and perhaps too little for "coordinate activities," and "auxiliary agencies." This would be a safe guess, if system A followed a prescribed accounting scheme. But, it has been noted above, that this system charges many items to "general control" which properly belong elsewhere. It is observed that system A expends practically as great a per cent for "instruction" as does system X. Both fall in that respect a little below the average of the 35 cities. But it is possible that both systems could properly charge enough other items to "instruction" to carry that per cent above the average.

Not until a rigid and uniform accounting procedure is observed can any reliable comparison of budgets be made on the basis of per cents

appropriated to the major character classifications

Which Is the Way Out?

School executives may ask: If comparison of our own budgets with those for comparable systems will not accurately show us how we stand, which direction shall we turn for assistance? The answer is, forget about the budgets of other school systems for the time being, at least forget about per cents of "general control," "instruction," and the like. Give attention to the local situation. It is well to ask the following questions:

1. Have school revenues been forecasted for a considerable period into the future so that the administrator has dependable predic-

MY SENIORS

Here they sit . . . Grave and serious mien, Sweet young lips, Bright-haired, Wonder-eyed! So eager for life, So sure of themselves, So vivid

Just realizing that Their life's journey Has started . . .

God bless them And keep them! -Martha Inez Johnson.

tions of assessed valuations upon which to build a cyclic budget?2 If revenues have been thus forecasted, there is a much better than hand-tomouth means of planning future funds with which to finance the schools. These forecasted revenues are to the school executive what predicted sales are to the business executive. Rapidly increasing property valuations provide an opportunity to retire present debt burdens, and at the same time, justify the assumption of future indebtedness. A predicted decline in property values, on the other hand, furnishes a warning of how far the schools may dip into the taxpayers' pockets.

2. Have per-pupil costs for "current expenditures" been computed? Do these run higher or lower than for comparable systems? Note that we are not comparing budgetary divisions here. but per-pupil costs in toto. If these costs are considerably higher than for comparable systems, what are the causes? It is not necessary to ask if "general control" or "operation" or "maintenance" are consuming a larger proportion of funds, but what specific items are causing higher per-pupil costs? If teachers' salaries are higher, they explain much of higher instructional costs. If the number of pupils to the teacher is lower, they also send instructional costs per child higher. If the system transports many of its children either to regular or special classes, that item will increase per-pupil costs.

3. Have different issues of outstanding in-

debtedness been amortized to realize maximum funds from present sources?3 The ultimate ability to pay a contracted debt may depend not so much upon the available funds as upon their management. Proper amortization of indebtedness may enable the school executive to take advantage of a rapidly increasing property valuation during a period of community growth, to the extent of providing buildings and equipment in advance of present needs, but assuredly necessary in the course of a short time.

4. As suggested in a previous paragraph, have the specific items of the budget been scrutinized from all angles to determine which ones are the causes of high costs? The only way to make such a check of the budget is to go through it item by item, with comparable figures at hand to measure costs. If fuel is costing more, there must be a reason. If light and power are costing more, there is also a reason. Either rates are higher in that community, or more of the commodity is being consumed per child in

attendance.

5. After all budgetary items have been examined from a cost angle, then they are reassembled into groups, according to a standard accounting procedure, to ascertain if "general control" is eating into funds of right belonging to "instruction," or if "operation" and "maintenance" are cutting too large a slice from the school dollar. In other words, the school executive is urged to go at the matter of getting "one hundred cents" value from every educational dollar in a reverse method from that usually prescribed. Merely discovering that "general control" is getting 8 per cent of the budget, as compared with less than 4 per cent, in comparable cities does not mean much when it is learned that the particular system charges many things to "general control" which properly should be entered elsewhere.

6. The final question should be: Regardless of per-pupil costs, is the school dollar well spent? This can be determined by a measurement of the various intangible products of education, a thing quite impossible in many respects. But, some of the aspects can be measured. If higher salaries are bringing in better teachers, then higher instructional costs are justified. If a larger and better janitor-engineer-

ing corps results in cleaner, more sanitary, better heated, and better ventilated buildings, then increased operating costs are justified to that extent.

The budget can be employed to return to the taxpayer full value for the funds he so generously provides for public education. But, this budget must be studied; it must be changed to meet new conditions; every item must justify existence and the amount charged to it.

The question for most school executives to answer is not, are we spending more or less than our neighbors for educating our children, but are we getting as great a return as we should out of what we spend?



A READING CLASS, SECOND GRADE ROOM, MADISON AVENUE SCHOOL, ATLANTIC CITY, NEW JERSEY

¹Elementary School Journal, 29: 6-7, Sept., 1928.

^{2&}quot;Forecasting S c h o o l Revenues," by the author, School Executives' Magazine, Apr., '29.
3"Amortizing, School Indebtedness" by the author, School Executives' Magazine, Oct., '29.

The Role of the School Physician¹

Charles H. Keene, M.D., Professor of Hygiene, University of Buffalo

The need and value of health activities in schools has been recognized by educational leaders. The National Education Association has placed health first on its list of the six major aims of education.

The program of school health gradually evolved during the last half century may be divided into seven major parts: the sanitation of the school plant; the hygienic arrangement of the school program; the health of teachers; the training of teachers for health activities; physical education; health training and instruc-

tion; and health supervision.

Health supervision is that part of the program, which has been called medical inspection. Progressive educators and health officials no longer consider it as a mere "medical inspection" for acute communicable diseases. It has passed from a primitive scheme for determining diseases and defects, through the phase of correction of defects and the restoration of the individual to the normal, and has now the same aim and ideal that basically actuates all public health activities — prevention. With this changing of "medical inspection" into health supervision, there has come an enormous broadening of the scope of the work.

With this broadening, the duties of the school physician have increased enormously. Formerly, he had one major duty — the prevention of acute communicable disease. Today he has at least four: sanitary inspection of the school plant; detection and prevention of acute communicable disease; health and physical examination of all pupils, teachers, and janitors; and advice and instruction in health and health teaching to the board of education, superintendent of schools, principals, teachers, parents, and

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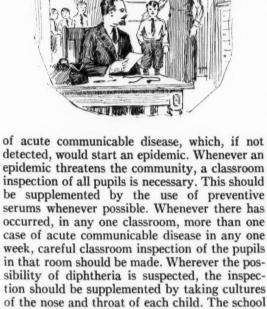
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The Annual Physical Inspection

As sanitary inspector, an annual examination of health factors and facilities should be one of the first duties at the opening of the school year. This covers such general factors as toilets, seating, lighting, blackboards, heat and ventilation, cleaning processes, and precautions against the fire risk. Certain variables, such as heating and ventilating, cleanliness of windows and blackboards, condition of toilets, seating of pupils, neatness of premises and of pupils, and the efficiency of cleaning methods, should be inspected at least once each month. In seating, it is not only necessary for all pupils to have a proper seat and one properly placed as regards light, but there is the very definite problem of placing most advantageously, in the best lighted location and near the blackboards on which the work is done, those children whose vision is definitely diminished. The partly deaf child, also, needs special seating consideration. He should be placed so that his better ear is toward the teacher and toward the class. As these pupils frequently depend partly on lip reading for their knowledge of class activities, the teacher should be instructed to stand, when speaking, in good light with her face toward such impeded pupils.

The Control of Communicable Diseases

The adequate control of communicable diseases demands a careful physical inspection of each child, within 48 hours after the opening of the fall term, and after any vacation, or closure, of school lasting more than eight days. This may be the ordinary, quick classroom inspection. Almost invariably, in a community of any size, there are found at such inspections cases



munized against diphtheria. Teachers and nurses should be informed so that they may recognize the early signs of acute communicable disease. Every suspicious case should be sent by the principal, teacher, or school nurse to the school physician, who will make the essential careful physical inspection. In every school building, there should be a chart of the district, upon which, by means of thumb tacks, should be kept a current record of the different kinds of acute communicable

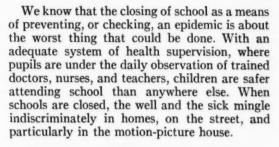
physician should conceive it a part of his duty

to persuade parents to have their children im-

diseases.

Following the finding of a case of communicable disease in a classroom, the physician should see that all the necessary steps for adequate sanitary cleansing are carried out. Up-todate communities no longer fumigate school classrooms in the belief that such fumigation checks the spread of communicable disease. The better process is a strenuous cleaning and scrubbing with hot water, soap, and antiseptic solutions. This scrubbing should include the floors, the seat, and the desk of the child having the disease, and all things which he might have touched, such as door handles, edges of doors, door casings, banister, and hand rails, and handles of the bubbling fountain, faucets, and toilets.





Character and Scope of the Physical Examination

The health and physical examination should be what the term indicates. A mere physical examination is not sufficient. It should be supplemented by a careful inquiry into those habits of the child which may affect the health of the individual concerned, or of the group with whom he associates. This should cover such factors as the type and amount of food, the time and method of eating, the amount and condition of sleep, the amount of activity and rest during waking hours, the use of fresh air and sunshine, and of play and recreation. Careful investigation of the proper use of the eye, the kind and amount of light used, the size and type of print, and of habits of posture is

The physical examination should include the history of the child, and a careful examination of the sight, the hearing, the heart, the lungs, the nose, the throat, the skin, the mouth, and the posture. This examination is largely a screening process. Definite diagnosis and treatment should rest in the hands of the family physician. The examination should be made with the aim not so much of finding defects and weaknesses in the child, as of finding his possibilities for health and school progress. In other words, a positive upbuilding attitude is essential to true success. The physician should remember that while the use of scales to obtain weight and height gives an index of growth, and is valuable as a means of stimulating interest in health habits, height and weight tables should be supplemented by his knowledge of racial, family, and individual characteristics as related to relative weight and height, and by his judgment of the nutritional condition of skin and underlying tissues.

Every community should organize some process whereby the examinations of school physicians may be standardized, so that the variations now existent between the results of examiners in the same city, and between those of cities having similar populations, may be eliminated. These variations tend to make the work ridiculous in the eyes of critics.

Such an examination and investigation requires time. It is doubtful if, on the average, more than six pupils can be adequately examined per hour. When we see reports indicating that physical examinations have been made at the rate of 30 to 60 per hour, we suspect that such examinations are useless.

The School Physician as a Health Adviser

As health adviser, the school physician should be an interested counselor of the school nurses regarding their own health; and as to the status of their information concerning the early signs of communicable diseases of children, the prevention of such diseases in their school district, the rules for the exclusion of children from school and for their readmission, and a knowledge of the diagnosis of minor infections - particularly of the skin - and their efficiency in first aid. To the parents he should be a mine of

¹An address read before the Child Hygiene Section of the American Public Health Association, and the American Association of School Physicians, September, 1929, at Minneapolis, Minn.

information concerning the early signs of communicable diseases; the need and method of correction of physical defects; and matters of home and school hygiene, particularly diet, rest, play, posture, fresh air and sunshine, play and recreation, school load, and the load of social activities carried by the pupil. Opportunities should be devised so that the school physician may make repeated contact with parents. If possible, the parents should be present when the child is given the health and physical examination. First-hand information acquired by the parent on such an occasion is more likely to result in the correction of defects and the enforcement of home hygiene, than could be brought about by a mere written notice.

The school physician should advise the teachers and the principals as to the sanitation of the building, heating, ventilating, lighting, sight conservation, seating, and care of toilets and premises. The organization, the administration, and the time element of the school program involve such important health factors that he should keep informed as to procedure, and make suggestions for improvement wherever he sees a need.

His knowledge of anatomy, physiology, and hygiene should be used to instruct teachers and nurses in certain phases of health training and instruction. This is particularly true in such matters as the control of communicable disease, the effect upon life and happiness of the chronic preventable diseases, and the basic elements of first aid.

The Physician and Mental Hygiene

The school physicians instruct teachers concerning mental hygiene. They should understand that their own mental and physical health has a very definite bearing on the mental atti-tude of themselves, and of pupils in the classroom. He should impress upon them the great mental and physical value of creating joys and stimulating ambitions. The ambition to be liked and thought well of is a perfectly normal one, so is the desire to be strong and straight in order to participate better in athletic contests. These ambitions distinctly encourage participa-tion in health activities. The ambition to be beautiful, too, is a perfectly normal desire, and beauty, when it comes from within instead of being applied on the surface, is an excellent health index. He should help them to understand that there are certain deterrents to mental health likely to creep into the classroom. Some of these are copied directly from the teacher when she exhibits sarcasm, temper, hasty reaction to irritations, or gives physical punishment. We find these rehearsed and accentuated in the daily life of the children, both at school and in the home. Certain pedegogical faults, such as threats, the arousing of jealousy, criticism which is destructive, the creation of worry, and fear of corporal punishment, create mental deterrents.

In many communities efforts are being made to use teachers for a considerable portion of the health and physical examinations of children. In some states this is required, by law or regulation. The duty of training the teachers for this special work devolves upon the school physician.

He should be a potent factor in creating, and in supervising the health side of special classes for the handicapped. His advice as to program and routine, the selection of the pupils, and such technical matters as lighting in sight-conservation classes, and as to diet, rest, sleep, and exercise for the undernourished, is essential. The type of physical education needed, varies from that for normal pupils, and from one group to another.

In addition, there are certain special activities for the school physician, such as the physi-

SENSATIONAL SCHOOL PUBLICITY

Beware of "stunt" and "hullabaloo" publicity. You may be tempted to use it in a bondissue campaign. And it may carry your bond issue. But in the long run your school system can progress only by virtue of an informed, intelligent, and even critical public opinion. Such an opinion cannot be built of tricks.—R. G. Jones, Superintendent, Cleveland, Ohio.

cal examination of students who participate in competitive athletics. No pupil should be allowed to enter such competitions until he, or she, has passed a thorough physical examination to determine that participation may be without organic physical injury. He should be informed as to the content of the physical-education activities, and see to it that these are adapted to the age, sex, physical ability, and endurance of the children who are expected to do them. He should prescribe and supervise special exercises for those exhibiting remedial postural defects. He should give definite instructions to pupils and teachers on certain phases of the general health-teaching program.

The Health of the Teaching Staff

He should encourage the principal, the nurses, and the teachers to bring to his attention those children whose health habits, physical condition, or mental attitude could be improved by his help and advice.

He should feel responsible for the personal health of the principal and teachers. He should advise them in groups, and singly, on such factors as health habits, particularly regarding food, rest, fresh air, and physical exercise, and on the need and value of correcting their personal physical defects. The time will undoubtedly come when principals and teachers will receive the same care and attention from the school physician that pupils now do. Such a service has great economic value to the board of education. It will improve the teaching process, because the more healthy a teacher the better work she will do; and it will diminish the amount of teacher absences because of personal illness. This will diminish the amount of money needed for the employment of substitutes.

The school physician also has a duty as adviser to the superintendent and to the board of education on such factors as the organization of the school-health program, and the sanita-

tion of the school plant. He should advise them regarding the time elements in the program of pupils, and the teaching load that teachers may be expected safely to carry. His advice should be valuable in establishing the content and method of procedure in the physical-education program. Before he can do this safely or profitably, however, he should inform himself as to the values and methods of good physical-education practice.

It devolves upon the school physician to bring about a definite correlation of his school activities with those of the local health department. This includes the immediate reporting of cases of communicable disease to that department. The work should be done by telephone, and by a written report forwarded not later than the end of the school day. In return the school physician has a right to receive the cooperation of the local health department; particularly that the central office of the public-school department be informed, not later than ten o'clock each morning, of cases of acute communicable diseases reported during the previous twenty-four hours.

Other Valuable Relations

He should establish friendly relations with the janitors and caretakers. Their cooperation means much, particularly when he is trying to prevent, or check, an outbreak of acute communicable disease, or to secure better cleaning, or ventilating.

He should establish relations with organized groups of parents and teachers. Membership in the local teachers' association, and the parent-teacher association is a distinct asset. He will learn much from these groups as to the community attitude toward the work he is trying to do. Such contact will make more effective the efforts to prepare the child physically for admission to school life—the so-called "preschool round-up."

He should use carefully and accurately a system of written daily, monthly, and annual reports, so that he and the teachers, principals, superintendent, board of education and the community, may be accurately informed of the status, progress, and value of school health activities.

In brief, the school physician should be interested, informed, and active in all those phases of school and home activity which affect the health of the pupil.



PUPILS STUDYING IN LIBRARY, HIGH SCHOOL, ATLANTIC CITY, NEW JERSEY

What Interest Shall School Deposits Bring?

H. H. Linn, Ph.D., Assistant Superintendent of Schools, Muskegon, Michigan

The public schools of this country are requiring an ever-increasing amount of money to care for the annual expenditures which already exceed the two-billion-dollar mark by a substantial margin. With the increasing costs of education comes the cry of the taxpayers to keep down taxes. Public officials at large are trying to comply with this request, but their task is not an easy one. They cannot be expected to uncover entirely new sources of revenue which heretofore have been hidden. The frantic attempts of our lawmakers to devise new schemes to add to the public treasury have already resulted in a tax system that is weird and awkward. More tantacles to reach down into the taxpayers' pockets would be unwelcome. Public officials will please their constituents much better if additional revenue can be secured without resorting to new schemes of taxation intended to take indirectly what is objected to directly. One means of securing greater revenue is through higher interest rates on bank deposits, something that can be done effectively in most states if the statutes are amended and if the public authorities take the proper steps to secure optimum interest rates.

It may be thought by some that interest on bank deposits is too insignificant to be seriously considered as a source of revenue for school purposes. It is true that this item is small when compared with an aggregate sum exceeding two billions of dollars, but it amounts to several million dollars annually for the country as a whole. If our schools can secure an additional million dollars or more annually through judicious administration, it is worthy of serious consideration. The writer proposes to show how

this can be done.

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Huge School Deposits

During the course of a year the banks in this country have on deposit, for a short period at least, school funds aggregating probably not far from three billions of dollars. This huge sum includes revenue and nonrevenue receipts, which, for the year 1925-26, amounted to \$2,171,-844,689,1 sinking funds, which, for the same year, totaled \$105,297,150;2 large amounts of permanent school funds; and a very substantial surplus carried as a balance on hand from the previous year. The balance on hand from the school year 1923-24 was \$488,854,303;3 and from the school year 1924-25, \$451,518,255.4 That this is a real surplus can be seen by studying the total receipts and expenditures for the interim. The banks, of course, do not carry school deposits amounting to anything like three billion dollars at any one time, but these deposits must average throughout the year several hundred millions. The writer estimates that the banks of this country carry an average of approximately \$500,000,000 of public-school funds⁵ on deposit during the year. This includes both time and demand deposits. Interest on a bank balance as large as this becomes important. A rate as low as only 2 per cent would bring in revenue amounting to \$10,000,000 annually. An increase of only one half of 1 per cent in the interest rate on bank deposits would add \$2,500,000 annually, and 1 per cent would

mean an additional \$5,000,000. The writer is convinced that, with certain statutory amendments and with proper methods of determining interest rates, the average rate on public deposits for the United States as a whole can be increased at least one half of 1 per cent with very little trouble, and an increase of 1 per cent is entirely conceivable.

It is not proposed that interest rates on school deposits can be increased in every school district in the country. In many places school deposits already receive the optimum rate. In fact, in some instances the rates are too high consistent with safety. Rates of 5 and 6 per cent are not unknown, although not common. It is very doubtful that rates as high as these can allow the bankers to carry the funds with any profit. On the other hand, there are places where the banks pay no interest on school accounts. In some instances the banks are given this consideration in return for keeping the school accounts, or for serving as depositories. In other cases the statutes are written so that the public officials may divide the school funds or place them in favored banks with no interest.

Statutory Variations

The statutes of the several states are largely responsible for the lack of uniformity in regard to interest rates on school deposits. Some make a distinction between time deposits and average daily bank balances. Others do not. In New Mexico the law provides that public deposits are to receive only 1½ per cent interest.6 All public deposits in New Jersey receive the uniform rate of 2 per cent interest. School funds are included with county deposits in West Virginia where the statutes prescribe 3 per cent interest on the public deposits, irrespective of whether they are time or demand deposits.7 Statutory provisions as definite as these prevent local authorities from securing better rates. There is no evidence to show that such an arbitrary determination of rates has secured greater safety for the public funds, as is frequently argued by the advocates of a uniform low interest rate on public deposits. One may be excused for suspecting that perhaps the lawmakers responsible for these low rates were friendly to the banking fraternity, especially in New Mexico and New Jersey where the rates are so low.

A few states have statutes which designate the maximum rate of interest that may be paid on public funds. For example, in Arkansas, the maximum rate of interest that may be paid on public deposits is 4 per cent.8 A lower rate, of course, may be paid. In Montana the maximum rate that may be paid on county funds, which include school funds, is only 2 per cent.9 It is difficult to understand just why the maximum rate in Arkansas should be double the rate in Montana.

New Mexico, Laws of 1925, p. 239. Barne's West Virginia Code Annotated, 1923,p. 674.

Acts of Arkansas, 1927, p. 582.

Laws of Montana, Twentieth Session, 1927, p. 417.

PUPIL AND PEDAGOGY

It is our conviction that most pedagogy and textbooks have been written from the standpoint of teaching rather than learning. We ake the spotlight the focus it upon the pupil. Learning is a personal, individual process. Mass instruction can never insure mass learning. Not what is done to a child, but what he does to and for himself counts educationally.—H. M. Buckley, Cleve-

In many states provisions are made for a minimum rate of interest to be paid on public deposits and the authorities are permitted to secure higher rates if they can do so. This plan is used more often than any other. A minimum rate of 2 per cent is quite common. California, 10 Idaho,11 Kansas,12 Maryland,13 and Mississippi14 are among the states that have prescribed a minimum rate of 2 per cent. The Louisiana statutes provide for a minimum rate of 3 per cent.15 The Iowa statute is unique in prescribing a minimum rate of 2½ per cent on 90 per cent of the average daily balance.16

The North Dakota Law

A few states have statutory provisions which specify both minimum and maximum limits on the interest rates on public deposits. In Wyoming the school deposits receive interest at the rate of between 2 and 4 per cent, the exact rate to be fixed by the officials who designate the depositories.17 North Dakota has statutory provisions that are more ideal. This state has different rates for the call and time deposits, a minimum rate of 11/2 per cent and a maximum of 3 per cent permitted for the former, and a minimum of 3½ per cent with a maximum of 5 per cent allowed for time deposits.18 The law further provides that "the board expects the depositories to pay interest on public funds at substantially the same rate it pays interest on funds deposited by private persons." The banks wishing to carry school deposits bid on the class and amount of deposit, thus, in general, giving assurance that the public will receive an optimum rate of interest on the public funds. In the writer's opinion, North Dakota, of all the states, has the ideal statutory provision for securing optimum interest rates on public funds, although it is recognized that the prescribed rates may not be ideal for all states.

Florida had made a distinction between time deposits and daily balances, but has established a uniform interest rate for each. In this state a uniform rate of 2 per cent is paid on daily balances of county funds, when such funds exceed \$2,000, and 4 per cent is paid for time deposits carried for a period of 3 months or longer.19 Florida communities are losing thousands of dollars annually because the local authorities are dividing the school funds into a number of different accounts of less than \$2,000 each, thus losing the 2 per cent interest which the law provides for daily balances exceeding \$2,000.

What is the Best Plan?

The question now arises, "What is the best way to obtain optimum interest rates on publicschool deposits?" If present practice in some states is now the best, the practice in others must be wrong. Why should New Jersey prescribe a uniform rate of 2 per cent interest for public deposits, while Montana provides a maximum rate of 2 per cent and California a minimum rate of 2 per cent? There is no consistency in such practice. Nevertheless, there must be some reasonable arguments in favor of each

¹⁰Code and General Laws, California, Deering Consolidated Supplement, 1925–1927, p. 1183.
 ¹¹Session Laws, Idaho, 1927, p. 203.
 ¹²Revised School Laws of Kansas, 1927, p. 40.

15 Marr's Annotated Revised Statutes of Louisiana,

Supplement, 1926, p. 1435.

¹⁶Code of Iowa, 1927, p. 575.

¹⁷School Laws of the State of Wyoming, 1927, p. 106. ¹⁸State of North Dakota, General School Laws, 1927. p. 19. "Compilation of the School Laws of the State of

Florida, 1925, p. 112.

¹⁸Maryland Public School Laws, 1927, p. 38. ¹⁴Hemingway's Annotated Mississippi Code, 1927,

^{&#}x27;Phillips, Frank M. "Statistics of State School Systems, 1925–1926," Bureau of Education Bulletin, 1927,

²Ibid. A part of this is kept on deposit. ²⁴Biennial Survey of Education, 1922–24," Bureau

of Education Bulletin, 1926, No. 23, p. 372. "Biennial Survey of Education, 1924-26," Bureau of Education Bulletin, 1928, No. 25, p. 596.
"These school funds are included with other public

funds in some cases and thus lose their identity while in the despositories.

plan or the statutes would not have been enacted.

Those who favor only a minimum rate of interest argue that this provision does not prevent the public from securing higher rates, but it does guarantee the public a reasonable rate at least. Without a minimum rate specified, it would be possible for those responsible for the administration of the school funds to favor certain banks by accepting an unreasonably low rate of interest or none at all. Opportunity for questionable acts on the part of public officials should be eliminated as much as possible so that public confidence will not be undermined. The arguments favoring a reasonable minimum interest rate on public deposits are fundamentally sound.

tally sound. Those who favor a maximum rate of interest argue that it is necessary for the protection of the public. Unless a maximum rate is specified, unsound banks in desperate need of funds may offer an unreasonable rate in order to secure possession of the public funds, and the funds are thereby jeopardized. Such cases have occurred in the past.20 Unreasonably high interest rates on public deposits are an indication of weakness on the part of the banks which offer them. Willis and Edwards point this out in the following statement: "It is an axiom of business that the amount of profit varies directly with the element of risk; if the necessity of granting interest on deposits forces a bank to strive for higher rates on its loans, obviously the possibil-

ity of losses will be increased."²¹

There should be no question about the value of a maximum rate for public deposits. The chief difficulty lies in determining what this maximum rate should be. If the maximum rate is too high, the better banks may not get an opportunity to carry the deposits, and the funds may then be placed in the weaker banks where the possibility of loss is enhanced. On the other hand, if the maximum rate is too low, the public

may not receive the rate to which it is entitled. Argument for Uniform Rate

Those who favor a uniform rate argue that the public is better protected against unsound banks, since the officials do not have to deposit the funds on the basis of bids, and therefore can select the banks that are perfectly safe. They argue, furthermore, that the uniform rate guarantees the public a fair return on the deposits, and that the banks are enabled to make a fair profit. The arguments may sound plausible, but here again comes the difficulty in determining the rate. If the uniform rate is too low, the public loses. If the rate is too high, the better banks may not wish to carry the deposits and the funds will be placed with the more doubtful banks. However, at the present time no state has such a high uniform rate that good banks will not carry the funds, but in New Mexico and New Jersey, at least, the uniform rates are lower than good banks would pay if they were required to bid for the deposits. The uniform rate, in practice, appears to favor the banks rather than the public. As has been stated before, there is no evidence to show that a uniform low rate offers any special guarantee for the safety of the public funds.

The plan of providing for both maximum and minimum limits to the interest rate on public deposits and then requiring the banks to bid for the deposits is the best. If the limits are reasonable, both the bankers and the public will be benefited; the bankers, because there will be no



AN OLD HIGH SCHOOL PUT TO NEW USES

The old Central High School at Harrisburg, Pennsylvania, is located near the heart of the business district of the city. The building, which was erected 20 years ago, is in perfect condition physically, but has been long ago outgrown by the high-school needs of the community. Recently the board of education transferred the building to the municipality, which is finding in it an almost ideal city hall and municipal office building.

needless cut-throat competition among them; the public, because it will be assured of a fair rate of interest consistent with safety. Furthermore, such a plan bolsters up public confidence and lessens the possibility of collusion between public officials and bankers at the expense of the public. This plan also should provide a distinction between demand and time deposits. Time deposits are worth more interest, and the banks are willing to pay a higher rate for them. Demand deposits are worth less to the banks and are not entitled to as high interest rates as are the time deposits. Just what the minimum and maximum rates should be for the different classes of deposits, the writer will not attempt to determine. These rates, no doubt, should vary in different sections of the country, depending on the money market and other economic factors.

The Law of Supply

However, optimum interest rates will not be obtained unless, in addition to maximum and minimum interest rates on the different classes of deposits, the statutes also require the banks to bid for the class and amount of deposit they wish to carry. Only in this way will the public be assured that the best rate is offered. If max-

THE INSTITUTIONAL AGE

We have invented institutions for nearly every human need or interest. To accomplish any purpose it is now the conventional thing to organize a group, elect officers, hire specialists, establish a program, issue plentiful publicity, establish rules and regulations, in short, to found as soon as possible an institution. Just as the individual craftsman has been swallowed up in mass production, so the individual effort has been swallowed up in group efforts and institutional development. This is a natural growth as there is a great gain in economy and efficiency through the institution just as there is in mass production and cooperative buying.-Harold A. Wooster, Librarian, Brockton, Mass.

imum and minimum rates are prescribed by law and the public officials are permitted to determine the exact rate and select the depositories, it is quite possible that the best interest rates will not be obtained. Furthermore, the possibility of collusion or favoritism will not be eliminated. At the present time the statutes in several states specify maximum or minimum rates, but allow the public officials to determine the exact rate to be paid. Furthermore, some statutes permit these officials to select quite arbitrarily the banks that are to serve as depositories. There is no doubt but that in some cases certain banks favored by the officials receive the deposits at a rate of interest lower than it should be. The law of supply and demand ought to operate with public deposits as well as with bond and stock prices. If there are strong banks that are willing to pay 3 per cent interest on school deposits, it is unfair to the public that rates of only 2 or 21/2 per cent is obtained. If, according to the law of supply and demand, the money is worth only 2 per cent interest, it is unfair to the banks to insist that they pay more. What the rate should be, according to the law of supply and demand, can be determined only by the banks bidding for the deposits. The average board of public officials cannot be expected to fix a rate that will be as fair as one determined on the basis of bids.

This discussion of interest rates may be summarized briefly as follows:

Additional revenue may be obtained for the public schools by increasing the interest on public-school deposits. At present there is little uniformity among the various state statutes in regard to provisions for securing interest on these deposits. Some statutes prescribe a minimum rate only, others prescribe a maximum rate only, and a few prescribe both a minimum and maximum rate. Some statutes make a distinction between time and demand deposits, while others do not.

The best plan for securing optimum interest rates on school deposits is to require all eligible banks that are interested to submit sealed bids for the class (time or demand) and amount of deposits they wish to carry, the interest rate to be kept within reasonable minimum and maximum limits fixed by the law.

ing and Business, Harper and Bros., 1925, p. 91.

²⁰Between 1919 and 1923, some Texas banks bid as high as 10 per cent on state deposits, due to the urgent need for funds at any cost. At one time state deposits amounting to \$2,000,000 were held by banks which were unable to pay on demand.—Faust, Martin L., The Custody of the State Funds, National Institute of Public Administration, New York, 1925, p. 35.

²¹Willis, H. Parker and Edwards, George W., Bank-

Selection, Promotion, Tenure, and Dismissal of School Janitor-Engineers

Harry S. Ganders, University of Cincinnati, and Charles E. Reeves, Elmira College

Modern school buildings require the services of janitor-engineers who have considerable technical knowledge concerning the operation of the mechanical equipment, a scientific attitude toward their work, attitudes of cooperation with others and loyalty to their schools, good moral habits, high ideals, and an appreciation of the beautiful in school buildings and grounds. If men of this kind are to be employed to take charge of school buildings and to perform the necessary services in them, they must be selected with great care. Men thus qualified can be had only when school authorities give as much attention to the selection of school janitor-engineers as to building principals. If men of this stamp are to be retained as janitor-engineers, there must be possibilities for advancement and promotion and their tenure must be reasonably secure.

Janitorial-Engineering Applications

Obtaining Applicants. The official in charge of janitorial-engineering personnel should, if possible, keep on file a list of applicants who are properly qualified to fill vacancies as assistant janitor-engineers. Sometimes, depending largely upon industrial demand for labor, it is difficult to keep a waiting list of qualified applicants and the administrator must accept men who are in ill health or have physical defects, men of low intelligence or questionable morals, or else make active search for more promising trained or untrained men to fill the vacancies.

When a waiting list for janitorial-engineering positions becomes short, or filled with applicants of doubtful qualifications, there are two things that should be done by the official in charge of personnel. (1) He should inquire into the possibilities of increasing salaries to induce men of better qualifications to apply. (2) He should actively search for men who are properly

qualified, to place upon his list. The official in charge of janitorial-engineering personnel, as a rule, cannot increase the amount appropriated for payment of wages. All he can do is to clearly present the need, through the superintendent to the board of education, for an increase in wages, sufficient to draw de-

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The official in charge of janitorial-engineering personnel can be active in seeking men of good character, intellect, and trade or mechanical experience, for his waiting list. He usually cannot resort to agencies, placement bureaus of colleges, and conventions, as does the official in charge of teaching personnel, but he can advertise for applicants in local newspapers and on posters. He can search in the vocational and high-school graduating classes for intelligent and energetic boys of good character to act as assistants or apprentices. If summer schools for janitor-engineers become more prevalent, he will be enabled to search them for candidates, both for positions as assistants and head janitor-engineers. He must by some means keep on hand a waiting list of candidates with qualifications which will reasonably insure their success in these positions.

Selecting Officers and Applications

To Whom Applications Should Be Made. Usually applications for janitorial-engineering positions should be made to the official who makes the selections, or to some member of his staff, designated to receive applications. At present janitor-engineers make applications to various officials. In village and rural school

systems, as well as in some cities, applications are, as a rule, still made directly to boards of education. Data showing to whom 267 janitorengineers applied for their positions are as follows:

Superintendent of schools.... Superintendent of buildings and grounds or chief Head janitor of building... Some other person, including principals, and assistant superintendents of schools..... Did not apply - were sought...

In the more progressive school systems teachers no longer apply to the board of education, directly, but to the superintendent of schools, who makes his recommendations to the board of education for its approval. This practice makes for a better selection of teachers. There is as much reason to believe that applications for janitorial-engineering positions should be made to the superintendent of schools, or to the proper member of his executive staff, as that teachers should follow this practice in making applications.

Some such provision as that made in the Evansville, Indiana, rules and regulations of the

board of education is advisable:

All applicants for positions in the janitorial-engineering department must file applications with the superintendent of buildings and grounds, such appli-cations to be subject to the approval of the business

This regulation would, of course, be most advisable when the superintendent of buildings and grounds and the business manager are directly responsible to the superintendent of schools.

The fact that applicants for janitorial-engineering positions so often apply to the board of education, or individual members of the board, rather than to the board's executive officers, is an indication that the administration of janitor-engineering service has been neglected. When applicants for such positions apply directly to the board, those who secure the positions are likely to feel that they are directly responsible to the board. This sometimes is a cause of friction between the educational authorities and the janitor-engineering force. It is also a cause of some inefficiency in the care of school buildings.

Written Applications Desirable

Applications for janitorial-engineering positions take several forms. About one half of such employees in schools of the Rocky Mountain region, from whom information has been secured, state that they made personal applications, about one fourth applied by letter, and the remainder stated that they had been "asked to take the job.'

While many school systems do not require

AT MIDYEAR EXAMINATIONS Claire Cooke (age 16)

There was a feverish hush over the room: Ranks of girls.

With heads bent in rapid, yet careful penman-

While others chewed pens anxiously, and gazed at the ceiling with preoccupied

frowns and rumpled hair, Seeking inspiration in the long rows of battered desks.

Or the blank surface of flat olive wall. And up on the instructor's desk,

Laughing at school books and January.

There were two daffodils in ruffled pale-yellow gowns,

officials will need to know in making selections of candidates and later concerning employees in Application forms should be filled by all applicants for janitorial-engineering positions. No intelligent choice can be made without certain basic information, such as previous experience

the filling of application forms, some have such forms which applicants for janitorial-engineer-

ing jobs must fill. These are constructed on the

order of teachers' application forms and contain blanks for such information as the personnel

in the care of buildings, other previous occupations, references to previous employers, age, sex, nationality and race, physical defects, and the like. When these forms have served their purpose for the selection of candidates, they may furnish data desirable to include in janitor-engineer's personnel cards.

Qualifications of Applicants. Very few rules and regulations analyzed by the writers state definite qualifications for appointment. Those stated are as follows:

Must possess an engineer's license (7) Must furnish evidence of having sufficient knowledge

of heating apparatus (4) Must have sufficient mechanical skill to properly operate and care for the mechanical apparatus (10)

Must be reasonably efficient in the use of coal (4) Must be reasonably proficient in the duties assigned (5) Must have a civil service examination (6)

Must be able-bodied (5)

Must present a physician's certificate of successful vaccination (2)

Must present a physician's certificate that he has no tuberculosis, lung or throat trouble, or other defect (3)

Must be a citizen of the United States and a resident of the city (3)

Must be able to read, write, and speak English (5)

Must be clean and neat in appearance (5) Must be of good character (7)

Must be of sober and regular habits (1)

Must not be addicted to the use of liquor or tobacco

Must not be addicted to the use of intoxicating liquors

Must be at least 21 years of age (1)-

Must be at least 25 years of age (2)

Must be between 30 and 40 years of age (1)

Must be between 25 and 45 years of age (1) Must not be under the age of 21 nor over the age of

Apprenticeship Desirable

It is desirable that the majority of appointments be made to positions as apprentices assistants or to skilled and experienced head janitor-engineers. Appointment of a candidate, who is not thoroughly trained, should never be made to a position as head janitor-engineer or custodian of a building. At the present time most training must be "in service" training, provided by the school administration. With these conditions in view, an applicant for a position as assistant janitor-engineer must be physically sound, not too young to accept responsibility nor too old to become skilled in the work. He must be able to furnish responsible references, to speak English, and should have an eighthgrade education. He must have good character and present a clean appearance.3

Civil Service Appointment. The reason that school janitor-engineers are so frequently appointed through civil service is not far to seek. It may be partly due to the habit of considercity employees rather school-board employees. But probably the main reason is that boards of education have too often used the appointive power as a means of

¹See Reeves, C. E. and Ganders, H. S. School Building Management, pp. 10-11. Published by the Bureau of Publications, Teachers College, Columbia University, New York, N. Y.

controlling local politics. Too often members of boards, who would not think of stooping to the appointment of teachers for political reasons, resort to such appointment of janitor-engineers. As a means of eliminating such practices by boards, the civil service is commendable. But the disadvantages are so great, where school boards and school administrators have a proper conception of the functions and importance of janitorial-engineering service, that it is time that civil service appointments be discontinued in favor of the method of appointment that obtains in the employment of teachers.

There can be little doubt that examination of applicants may be extremely valuable both for aiding in the selection of new men and in making promotions to the higher positions in the janitorial-engineering service. Also there can be little doubt that most such examinations, as now given by civil service commissions, are of little or no value in determining properly qualified candidates and often are worse than useless. Such examinations are usually given by city officials who have no knowledge of the actual requirements of the school service. Considerable weight is given to ability in spelling and arithmetic, which has little application to janitorial-engineering efficiency. Sometimes questions dealing with the duties of janitor-engineers are included, but these often show indications of having been written by persons wholly unfamiliar with school janitorial-engineering service.

What Examinations Fail to Find

As closely as such questions may be related to the work of the school janitor-engineer, their inadequacy as a sole means of making selections from applications is apparent. An applicant might pass such an examination with an exceedingly high mark, but that would be no guarantee that his health were good; that he had a good moral character; that he had skill in performing his work; that he could get along well with the principal, teachers, and pupils; or that he would be fitted for a particular job. These disadvantages are all aggravated when civil service laws prevent the discharge of employees by school authorities.

Civil service appointment gives the school authorities no chance for personnel work in selecting janitor-engineers. "Merit," as determined by the results of a written examination, determines the selection. No account can be taken of other desirable characteristics which applicants may possess. Such personnel work is necessary, not only in considering other qualifications of applicants, but in selecting them for particular positions for which they are best fitted. Civil service appointment is a hindrance to the securing of competent janitor-engineers, because it takes the selection of such employees out of the hands of school authorities who are responsible for the work of the schools and the care and protection of buildings.

Examinations are desirable, but not as a sole criterion of the fitness of an applicant. Where they are given, the questions should be written and the answers scored by men in the school system, who have expert knowledge of school janitorial-engineering service. Such examinations, of course, are of little use in filling assistant janitorial-engineering jobs unless opportunity is given for special training or unless they are given after a period of probation. There is, at present, little opportunity to learn the work until the man is "on the job." Examinations have their greatest value in selecting the group of assistants, or from n experience outside the system, the candidates having the best knowledge of the work, to fill the positions of head janitor-engineer.

School administrators naturally take an unfavorable attitude toward civil service appointment of janitor-engineers. The following extracts from letters received will give some

notion of their attitude toward this means of making selections:

Our custodial positions are all classified under civil service. Appointments are made from the three names having the highest grades on the civil service lists. When an appointment is made, the civil service commission adds the name of the applicant having the next highest grade, making three names, including the two who were rejected, from which the next appointment is made. By this method we have practically no choice in filling positions. Furthermore, applicants can be discharged only for cause considered sufficient by the commission. This arrangement is not conducive to best results.

All employees of the department of education, except those on the educational side, are under the city civil service rules and regulations and all vacancies are filled upon request made of the civil service bureau. This system is not satisfactory.

Janitors Need Physical Examinations

Physical Examinations. It is quite common for school systems to require complete physical examinations of applicants. Garber found that medical or physical examinations were given to applicants in 73 of the schools reporting to him. The State of North Carolina requires a medical examination of each applicant for janitorial-engineering positions. According to the statements of janitor-engineers reporting from the Rocky Mountain region, only 7 of 122 had been given physical examinations previous to appointment.

Certainly the health of janitor-engineers is as important to the school as is that of teachers. Their work exacts more of physical vigor and vitality. It is just as important that they be free from disease. The writers submit that as janitorial-engineering service is accorded its rightful place among the important functions of the school systems, physical qualifications, at least, will have to be met by applicants.

Probation. Appointment of assistants for a probationary period is desirable. This plan is sometimes permitted by civil service commissions. The possibility of dismissal of unsatisfactory candidates, by the school authorities, within 6 months, helps to minimize some of the disadvantages of civil service appointment. The placing of applicants on a period of probation; using applicants as substitutes before appointment; hiring applicants for a period of time as day laborers; all may be used for purposes of determining whether applicants are qualified for permanent appointment. One or another of these plans is in common use. Probationary appointment may not be necessary where applicants can be used as substitutes, but unless the substitute work is steady, it will be impossible to engage the best applicants for occasional work. The following excerpt from a letter written by an official in charge of janitorial-engineering service illustrates the third method:

The method used in hiring is to employ janitors as laborers at the laborer's wage scale. In this way we study the character and disposition of the men and later elevate them to positions as janitors.

Selection, Recommendation, and Appointment

In letters from superintendents of schools to the authors, concerning the janitorial-engineering service of their school systems, a number stated the method of selection of employees. The number of cities in which various officials select janitor-engineers is as follows:

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b	oard																			. 1
By	the	supe	rin	ten	dent	of	S	ho	ols	s.										
By	the	super	rint	tend	dent	of	bu	ild	in	25	a	nd	1	gr	01	ır	d	5	0	r
tl	he b	usine	SS	ma	nag	er.														. :
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If this were representative of general practice, conditions would appear to be favorable to the selection of janitor-engineers, in the main, by properly qualified school officials. Other data tend to show that these letters are not representative. Harshfield found that in the rural schools of Cuyahoga county, Ohio, the school board selected janitors in 19 buildings and the superintendent or building principal selected them in 15 buildings.

Of the 45 janitors whose work was studied by the writers in the schools of New Jersey and Connecticut, selections had been made as follows:

IOHOWS:	
By the board of education	20
By a committee of the board of education	10
By the superintendent of buildings and grounds or	
the business manager	10
By building principals	5

In small cities and villages of the Rocky Mountain region more than 50 per cent of the janitors reporting had been selected by boards of education. Garber found that where janitors are not appointed by civil service or a "merit" system, they are selected and recommended for appointment as follows:

appointment as follows.	
By the board of education as a whole, or some committee or some member of the board of	
education	243
By the superintendent of schools	342
By the business manager or secretary of the board	27
By the superintendent of buildings, custodian, head	
janitor, or chief engineer	45
By building principals	19
By a "political leader"	1

According to a Massachusetts report, janitorengineers are recommended and nominated as

101	lows.	
By	the school committee (board of education) 15	Ś.
By	the superintendent of schools 11	1
By	teachers	
By	selectmen	
By		-

The data presented are somewhat conflicting. In some it would appear that selections are still

(Continued on Page 142)



THE NEW YORK BOARD OF SUPERINTENDENTS IN SESSION

The Board of Superintendents of New York City meets weekly to discuss major problems of administration and hool policies. From left to right: Joseph M. Sheehan, Charles W. Lyon, Miss Margaret J. McCooey, Supt. Wm. O'Shea, Edward Mandel, and John E. Wade.

(Wide World Photos.)

Principles Underlying the Minimum Teachers' Salary

Superintendent R. C. Clark, Seymour, Conn.

In constructing a salary schedule it is inevitable that consciously or unconsciously certain principles will be followed. The present-day administration of our better school systems is marked by a shifting from the practice of building up through tradition, imitation, and best guess of unconsciously formed policies to the development of policies, consciously adopted after a careful systematic study of all the fac-

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It seems elemental that school authorities should know why they pay what they pay. Not to do so, is to administer carelessly the trust which is theirs. The taxpayer has a right to know in definite terms what his money is paying for. Knowing this, he is a more willing contributor. It is conducive to harmony that teachers should know why they are paid what they are paid. For every item in the construction of the salary schedule the board of education should be able to say, "There's a reason," and to state that reason in the form of a consciously

adopted principle.

Much of the agitation for increases in teachers' salary would lead us to believe that the purpose is to make it possible for the teachers to wear fine clothes like other girls do. If this is the aim, (and I know no reason why they shouldn't), let us take as a principle something to the effect that the salaries should be fair to the teachers. If in addition to this we wish to secure for the children the best possible teaching, we should analyze as objectively as possible, the qualifications we wish to secure, and let our set of principles as well as the schedule itself show that we consider these qualifications valuable. If there are other factors that should be considered, they should be definitely included in the set of principles. Only after these principles have been accepted, can a schedule be intelligently constructed. The writer is firm in the conviction that the principles adopted should be published as a part of the salary schedule. Principles reduced to a form suitable for printing in a document to be read critically are likely to be well thought out. The mere fact that these principles are stated, inspires confidence. Even those who may not accept the validity of the principles stated, know that the matter has had careful consideration. A feeling is established that affairs are being conducted in the open. The printed principles show an endeavor to deal impartially with the teachers and to insure value in service for the money paid.

Seven Major Principles

It is the purpose of this paper to critically discuss the principles used in determining the minimum or basic salary. Conclusions are influenced by the writer's experience as an administrator, by a careful study of the available literature, and by a first-hand study of many schedules actually in operation.

Principle I. Common practice is a factor in determining the minimum salary.

In most instances the school authorities who are constructing or revising a salary schedule begin by obtaining and studying those of nearby towns of about equal size. The salary schedule is a competitive instrument. As a rule, if initial salaries are lower than those paid in competing towns, the administrator does not have much freedom in selection. All other things being equal, teachers will seek the better pay, and only after failure to receive positions in the towns where there is a better salary will they accept the smaller pay. Those who do accept will have a feeling that as workers they are unfortunate in their location. All other things

being equal, a minimum salary higher than that paid by other towns will give the administrators wider choice of promising young teachers. On the other hand, it is possible that a town, in an enthusiastic desire to employ teachers superior in personality and training, might adopt a minimum salary higher than is necessary to attain its commendable objective.

The effect of current practice on the minimum salary is very great. A study of the schedules of 66 Connecticut towns and cities ranging in population from less than 2,500 to over 200,000 showed that 52 of these towns had the same minimum for two-year normal-school graduates. None were more than \$100 lower and none were more than \$100 higher. Connecticut is a compact state. Its towns and cities have much in common, yet it is safe to assume that one of the most influential factors determining the minimum salary was current

Although current practice should be studied and undoubtedly should influence the minimum salary, it is not an infallible criterion. Differing conditions in different towns may influence the situation. Teachers as a class are not especially avaricious. Other factors, such as cultural opportunities, location, congenial boarding places, and superior supervision, may make a position attractive. The general salary level in county or state may be too high or too low. The pioneer who blazes the trail alone or the conservative who adopts as his motto, "prove all things; hold fast that which is good," may be more sound in

Living Wage Essential

Principle II. The minimum salary should be a living wage.

In cases where the minimum is less than a living wage, the beginning teacher becomes a child laborer in that she must look to her family for partial support. As the normal-school graduate has refrained from becoming a wage earner for at least two years after high-school graduation in order to prepare for teaching, it would seem that she should be self-supporting from the first. "Most authorities estimate that the cost of board and room runs at approximately 50 per cent of the total necessary living expenses." If this statement is acceptable, the minimum in a town where board is \$10 a week should be \$1,040. Where it is \$11, it should be \$1,144. Under this principle the minimum salary should show a wide varience according to social, economic, and geographic influences which determine the cost of living in different towns. It is possible for the same money wage to mean a great difference in real wage according to locality.

The minimum salary together Principle III. with prospects of increases to a desirable maximum should attract intelligent, well-trained young men and women to the teaching profession.

It is trite to emphasize the importance of education and equally so to point out the strategic position of the classroom teacher in the educational task. It has not been sufficiently stressed that teachers should be a highly selected group. We must have character, vigor, intelligence, judgment, personality, and training. There may be a sufficient number of young men and women ready to take the required training and yet not be a sufficient supply of desirable teachers. The job of the teacher is too important to be assigned except to those best suited for the

work. One great cause of a seeming surplus is the desire of the beginning teacher to live at home with her parents. This accounts for a surplus of teachers in our cities and for the fact that the minimum salary is about the same in cities as it is in the smaller places.

Rural Teaching Difficult

On the other hand, if we wish the trained teacher to leave home and teach in more remote towns, we must make it attractive to her financially. The law of supply and demand would require that rural teachers be paid a higher initial salary than those of larger towns. Many teachers do not care to work under rural conditions. The rural-school position requires even more initiative, more of understanding, more of reliability than the city school. Too often it has been assumed that any teacher who is not good enough for the city can teach a rural school. The task of the country teacher is such as to tax the abilities of the most gifted and best trained. To secure such a teacher the rural schools must pay an adequate initial salary.

The cost of living is usually higher in the larger places. Hence, the minimum salaries should be higher in the larger towns than in the rural districts. The teacher supply in the small towns is less in proportion to the demand than in the cities. Hence, the minimum salaries in the rural districts should be larger than those paid in the cities. Here we have contradictory principles. The solution is that the larger places should pay a living wage and the smaller places should pay enough to attract well-trained and

capable teachers.

Principle IV. The minimum salary of the teacher should compare with that received in other work requiring equal preparation and capabilities.

The writer has little sympathy with propaganda which compares the salaries of teachers with those of plumbers and bricklayers. The average woman teacher would not be happy in either of these trades any more than these workers would be happy as teachers. To say that the immature beginning teacher should receive the same salary as the mature though unskilled laborer is assertion pure and simple. The salary of the teacher should be compared rather to that of the stenographer, the nurse, and other workers filling positions which people of the same sex and similar training may hold. A comparative study of the salaries of these positions with full consideration of the amount and conditions of training, kind of work, future prospects, in short, all factors involved, would be most interesting and throw some light on the question of both the minimum and maximum salary.

Principle V. The minimum salary level should fully recognize the amount of training.

The two-year normal-school graduate has invested money in her education. Moreover, she has been kept in the ranks of the nonwage earner during that time. The minimum-salary level should fully recognize this fact. If she has had three, four, or five years of preparation, this should be given full weight in determining the minimum salary. It seems obvious that the teacher who begins her teaching after four years of preparation, should receive at least as much would have received in her third year of teaching, plus 6 per cent on the wages she would have earned in the meantime if she had started teaching after two years of training. The rule that each additional year of training shall count as one year of experience in establishing the minimum seems inadequate.

¹Almack, John C. and Lang, Albert R., Problems of the Teaching Profession, p. 236.

ation and upt. Wm. l Photos.)

The Teacher's Investment in Training

When the schedule begins, a teacher with four year's training starts at the same salary she would have received at the same age if she were a normal-school graduate and advancing at the same annual increase, she will not receive a cent of interest on her investment in additional education. Nor will she receive any of the salary which she might have earned until she has advanced beyond the maximum for two-year normal-school graduates. The case of the mythical Miss Green is an illustration. She studied the local salary schedule in her home town and found what she would be earning at different ages as a normal-school graduate as contrasted to what she would earn as a college graduate. She found the following facts.

Age	20	21	22	23	24	25	26	27
Normal Grad.		1,100	1.200	1.300	1.400	1.500		
College	1,000	1,100	1,200	1,500	1,400	1,500		
Grad.			1,200	1,300	1,400	1.500	1,600	1,700

At the end of six years she will be \$2,100 richer by having attended the normal school. If she is so unfortunate as to fall in love and marry at the end of that time, which is strictly against the rules of the school committee, she will be dropped and never receive as a teacher, any financial return on her investment. For having given two extra years of preparation she will lose the opportunity to earn \$2,100. If she continues, she will, when she is 27, receive almost 6 per cent on her investment. She will never get her \$2,100 back. Such a schedule is not attractive to the college graduate. The writer fully appreciates that financial return is not the only reward of a college education, but when college graduation is a minimum requirement for eligibility to a position, the compensation should be such as to make a financial

Principle VI. Some positions require a higher initial salary than others.

Historically, the lower grades were always paid a lower salary than the higher ones, even where the teacher's preparation was the same. The development of the single-salary schedule discredits this practice, contending that the basic salary should depend on training alone. In many schedules, however, there seems to be an assumption that some grades, notably grades seven and eight, require special qualifications aside from training and that teachers in those grades should be paid a higher salary even from the beginning. The merits of these conflicting practices will be discussed in a later paper. Sufficient to say here that, if these positions do require special qualifications which the others do not, if the work is more taxing or important, they should command higher salaries. If not, there is no reason for discrimination.

Higher Salaries for Men?

Principle VII. The initial salary for men teachers is usually higher than that of women teachers.

Attention is called to the fact that I say "is" not "should be." The problem has been the subject for much debate for several years. Each side has its earnest supporters. There should be equal pay for equal service without regard to sex, say those on the one side. Those on the other side contend that there are good and sufficient reasons why men should be paid more than women. This is a principle, however, that the schedule maker must accept or reject in determining the minimum salary level.

The Influence of Home Talent. One of the factors that will undoubtedly influence salary levels is the extent to which local girls, home talent, as they have come to be called, are employed. The effect is usually to lower the salary level. Those who board at home can live more cheaply. They are often willing to work at lower

wages for the satisfaction of being with relatives and friends. It is a temptation for schedule makers to capitalize this attitude. On the surface it seems good business to do so. Examined more carefully, it is seen to be dangerous. Even if the number of available teachers does not lessen, the quality probably will.

If the number of home teachers is insufficient, the school administrators cannot compete for desirable teachers from other towns with a low salary schedule. If the requirements for a teaching position are simply normal-school graduation and a certificate that father is a taxpayer, then choice is likely to be confined to mediocrity or worse. If this is the condition and it is to continue, a mediocre level of salaries should be paid. It sometimes happens that under such circumstances the large number of organized voting teachers with friends and relatives who are politically influential, are able to force a schedule higher than the service warrants. Such a condition is not fair to the taxpayer.

It may be inferred from the above that the writer is opposed to the employment of home teachers. Such is not the case. All other things being equal, the home teacher should be employed in preference to the outsider, but where all other things are not equal, where in order to maintain a high standard of efficiency on the teaching staff it is necessary to employ outside teachers, the salary level should be high enough to make it possible to secure them.

Minimum Pay is Part of Schedule

Conclusions. While it is evident that there should be a wider difference between the minimum salary of the normal-school graduate and the college graduate, it is difficult to discuss the minimum apart from the schedule as a whole. The initial salary is not so important, if there is an expectation of fairly rapid promotion to an eventually high maximum. No reasonable minimum can make a blind-alley job attractive to a person who is looking toward a career. As a general rule it may be said that, if the higher levels of the schedule are attractive, lower levels

need be less so; but, if higher levels are not sufficient, lower levels will need to be comparatively high

To prepare teachers to do the task demanded of the elementary schools of today, two years of normal-school training are not sufficient. The time of the normal-school training should be extended to give a more nearly adequate preparation. Our excellent normal schools should be more highly selective to the end that normalschool graduation may be a more positive evidence of the possession of ability, industry, resourcefulness, reliability, and all the many qualities that go to make a good teacher. The employer should be critical and eliminate those who cannot become good teachers. It would be unfortunate to close the doors of the teaching profession to those of limited means. These people need a living wage at the start. If we are going to demand extensive preparation, select the best qualified, and admit those poor in purse but rich in ability, the beginning salary must afford at least a modest living

On the other hand, it is a fallacy to assume that the normal-school or the college graduate is a full-fledged teacher. The first year or two in the classroom will usually not be very productive. Close and skillful supervision is necessary even for the most capable and well trained. The normal-school graduate must become skilled to apply what she has learned. There is a difference between practice teaching and teaching on the job. The college graduate, rich in college lore, is often ignorant of classroom technique or, if she has been taught this in theory, she is at a loss as to how to put it into practice. The first two or three years of teaching are preeminently a learning period. Service rendered does not warrant a high salary. If there is a recognition of extensive preparation to start and an assurance of a satisfactory future reward for the successful, a living wage should be sufficient for the beginner. That is to say the beginners' salary should support the teacher and give a reasonable return on her investment in training in order to induce a sufficient supply of trained and capable teachers.

Present Trends in the Use of Visual-Instruction Aids

V. L. Kooser¹

Visual instruction is defined as the enrichment of education through the seeing experience.

Too many times we think of visual aids only as motion-picture films, stereopticon slides, and film slides. However, there are many other very important visual aids. Consider the following list:

ing list:	
Apparatus	Motion picture
Blackboard	Museum collection
Bulletin	Pageant
Cartoon	Photograph
Chart	Post card
Cuttings from magazines	Poster
Demonstration	Print
Diagram	Sand table
Dramatization	School journey
Drawing	Sketch
Exhibit	Slide
Globe	Specimen
Graph	Stereograph
Map	Tableau
Model	Textbook illustration

One of the important developments in visual instruction is the interest that educational institutions are taking in this subject. During the summer of 1928, there were 50 educational institutions offering courses in visual instruction. Approximately 95 institutions offered courses to summer-school students during 1929.

'The writer is Assistant in Charge of the Visual-Instruction Service of Iowa State College. The present paper is an abstract of an address before the Iowa State Teachers' Association, November, 1929. There are 4 different types of visual-instruction institutions that may be considered as service organizations in the visual field.

- 1. Approximately 38 cities have centralized departments in direct connection with the public-school system. This includes only the larger cities and does not embrace those cities having part-time directors and teachers who are doing some work in visual instruction as an incidental part of their activities. Some very fine work is being done in such cities as Los Angeles, Pittsburgh, Chicago, etc. Complete manuals and catalogs have been prepared by these organizations in order to better acquaint the teachers with the details of the system, and the materials available.
- 2. The state extension bureaus in the universities and colleges serve a very important place in the field of visual instruction. Large libraries of visual aids are available for schools and other nontheatrical institutions. There are 40 of these organizations at the present time, and this figure is steadily growing. The service offered by these organizations is being greatly improved, with the ability to secure libraries of better educational material.
- 3. The states of Ohio, Pennsylvania, and New York, have state bureaus of visual instruction. These operate in direct connection with the state departments of education. In this way

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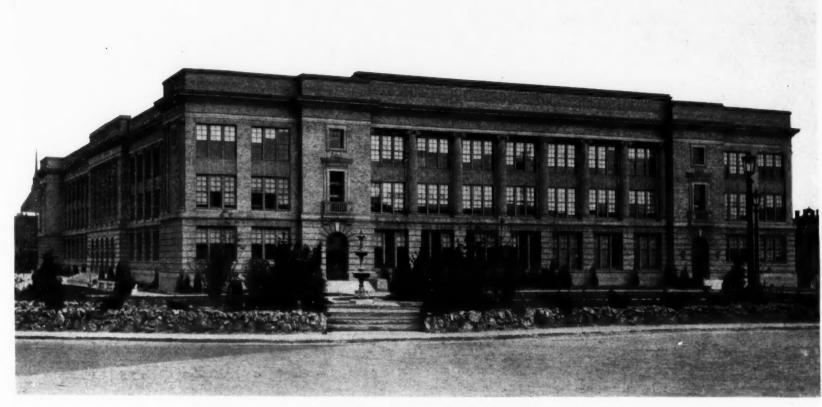
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JOHN HAY HIGH SCHOOL, CLEVELAND, OHIO George M. Hopkinson, Architect, Cleveland, Ohio

THE JOHN HAY HIGH SCHOOL Geo. M. Hopkinson, Architect

The John Hay High School was completed and opened in September, 1929, and is located at the corner of Carnegie Avenue and E. 107th Street, in the University Circle district of the City of Cleveland. The building proper occupies about 50 per cent of the property owned by the board of education at this location, and it is so designed and planned that it can be made to fit in with a complete educational development which, no doubt, will be the ultimate use for the balance of the property.

The property of the board extends 502 feet on E. 107th Street, 640 feet on Carnegie Avenue, 540 feet on E. 109th Street, and 364 feet on Deering Avenue. Marlborough Avenue, which originally extended through the property from E. 107th Street to E. 109th Street, was vacated by the City of Cleveland, and became the property of the board of education under which the school building has been built.

In the event the entire property in future years is used for educational buildings, and the possibility that the buildings should be tied in with some future University circle group centering upon the Art Museum in the distance, the architect has considered the possibility of facing the completed whole either on the University Circle side, or the Carnegie Avenue side of the property, and provision has been made in planning to carry out either of these possibilities, in which event the present unit would harmonize and be a part of a completed whole.

The present main-entrance facade of the building is located on E. 107th Street and sets back from the street approximately 75 feet.

Classical architecture was chosen for the design of the exterior of the building because it is the most appropriate for the setting, for future possibilities in the deevlopment of a future University Circle group, and because it harmonizes in style and feeling with the Museum of Art, which will be the pivotal structure of any group plan that may develop in the years to come. The classical spirit of true Greek and Roman thought and tradition has been incorporated in

the design down to the minutest detail to complete a true interpretation of the classic in its application to school-building design.

The architectural treatment of the interior of the main entrance, the auditorium, and the library has been carried out in the Italian Renaissance style.

The building contains recitation, typewriting, bookkeeping, penmanship, science laboratories, cooking, printing, journalism, and artrooms, gymnasiums, auditorium, library quarters, filing and office-appliance department, instructional telephone room, study halls, lunchrooms, music, sewing, and tearooms, in addition to administrative and utilitarian units.

The auditorium is located immediately off the main entrance on E. 107th Street, and has a seating capacity for 1,800 pupils. The stage has been made especially adaptable for the presentation of educational and dramatic features. An orchestra pit is provided in front of the stage and space is allowed at the side of the proscenium arch for organ chambers.

Two large gymnasiums are located on the ground floor on the Carnegie Avenue side of the building, and these can be converted into one large room without inconvenience, by means of folding doors.

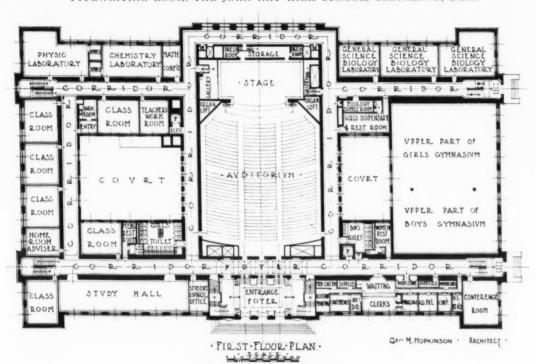
The cafeteria, with teachers' lunchroom adjoining, have been centrally located on the third



AUDITORIUM, JOHN HAY HIGH SCHOOL, CLEVELAND, OHIO



TYPEWRITING ROOM, THE JOHN HAY HIGH SCHOOL, CLEVELAND, OHIO



VNFINISHED RIDOF CLASS ROOM SHOWER ROOM GYMNASIVM GIRL CLASS PLENVM CHAMBER ROOM CLASS ROOM GYMNASIVM ROOM HALL VNFINISHED VNFINISHED GEO. M. MOPKINSON . - ARCHITECT

GROVND FLOOR PLAN

JOHN HAY HIGH SCHOOL, CLEVELAND, OHIO



ENTRANCE DETAILS, JOHN HAY HIGH SCHOOL, CLEVELAND, OHIO

floor, from which a fine view of the east is obtained, and where abundant light and fresh air are found. The pupils' cafeteria will accommodate 650 pupils at each seating.

The library quarters are centrally located in the building on the second floor, flanked by large study halls, each accommodating 150 pupils. This library suite consists of a main reading and lending room, librarians' quarters and workroom, a library lecture room, and a teachers' library and study room.

Art rooms are to be found on the third floor, where exceptionally light rooms have been provided by means of overhead lighting, in addition to the side lighting.

The rooms in the department of music, also on the third floor, consist of a lecture room and orchestra room, both of which can be converted into one large room. A miniature practice stage has been made available at the north end in connection with both rooms.

The tearoom, adjoining the domestic science and lunchroom, is located on the third floor in the northeast corner of the building, and is equipped and decorated in modern tearoom fashion to lend the proper atmosphere to the subject being taught the pupils who desire to study tearoom management and allied subjects.

Each room in the building is wired for the use of radio loud-speaker and public-address sys-



INTERIOR VIEW OF MAIN ENTRANCE LOBBY



tem, with microphones located on the stage and in the principal's office. Under this arrangement when instruments are purchased, it is possible for one to talk to all pupils throughout the building at the same time, and also to take care of whatever the future may hold for radio reception, as this branch of modern science develops.

Mechanical equipment incorporated in the building is of the latest type selected for efficiency of operation and minimum maintenance costs. The mechanical details in general are as follows:

The boiler room contains three brick-set horizontal-return tubular boilers, each of 200-horsepower capacity, equipped with automatic stokers, and an additional auxiliary steam boiler for cafeteria use when the main boilers are shut down.

11

The heating and ventilating is what is known as a split system, with tempered air supplied to the rooms, and direct radiation in addition. The ventilation is divided into various units consisting of auditorium, cafeteria, gymnasium, and classrooms, with a mechanical exhaust system. The auditorium ventilation is by means of plenum chamber.

The stage is equipped with a combination preselective, accumulative, remote-control, pilot switchboard, with dimmer bank and the usual border lights and miscellaneous electrical outlets.

There has been installed a twelve-sweeper vacuum-cleaner system, also pneumatic clocks with program device for automatically ringing the bells, and automatic dial-type telephone system.

The construction of the building is fireproof throughout, with the floors and roof of straight reinforced concrete and structural steel. First-class materials have been used and in no instance has second-class construction been considered.

The exterior grounds immediately surrounding the building have been landscaped with appropriate planting, lawns, terrace and walks, with especial thought given to the trees and planting, both in distribution and kind, to complete the classical thought expressed by the building.

FILING
CLASS CLASS CONL
ROOM ROOM INF
PRISSING ROOM ROOM
CORRIDOR

VPPER PART
OF STAGE

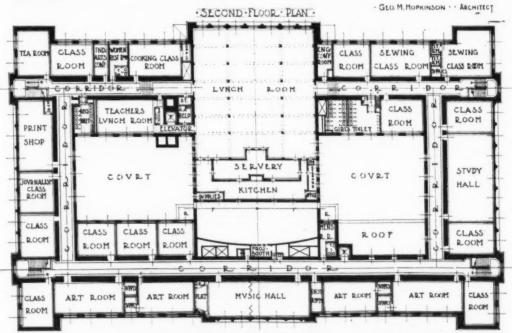
CORRIDOR

CLASS
CLASS
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CRITICAL

TYPEWRITING

COVRT
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R

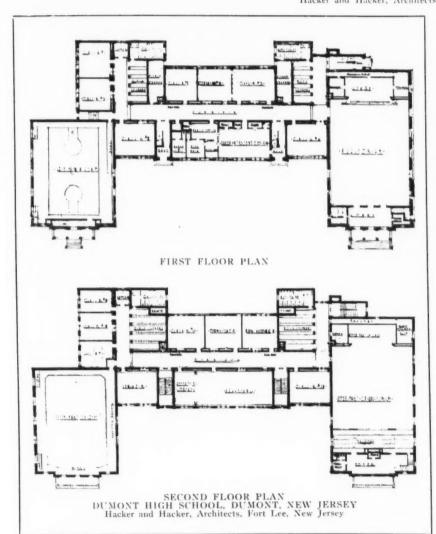


JOHN HAY HIGH SCHOOL, CLEVELAND, OHIO

BOOK KEEPING



EAST ELEVATION, DUMONT HIGH SCHOOL, DUMONT, NEW JERSEY Hacker and Hacker, Architects, Fort Lee, New Jersey





NORTHEAST PUPILS' ENTRANCE, DUMONT HIGH SCHOOL, DUMONT, NEW JERSEY Hacker and Hacker, Architects, Fort Lee, New Jersey

THE DUMONT HIGH SCHOOL AT DUMONT, NEW JERSEY

The identical principles of planning and constructing a school building, as applied to a situation, frequently result in totally different buildings. Local educational programs, local sources of materials, local economic conditions, and local ideas about architectural style frequently cause an architect to apply the same principles in a totally different manner. An instance is the Dumont High School at Dumont, N. J., where Messrs. Hacker & Hacker, architects, have recently designed and completed an interesting building. This building is planned and constructed on the principles employed in

planning and constructing the Teaneck School, illustrated and described in the JOURNAL for January. Local conditions and local needs have, however, produced a building which is in some respects quite different.

The Dumont High School is designed in the late Georgian style, with some touches of the Colonial. The exterior is of vitrified face-brick, in shades of light and dark red and purple-blue. The necessary stonework has a suitable, as well as a decorative function. The exterior metal work is copper and wrought iron and no wood has been employed on the exterior, except on the window sash.

The exterior construction is of concrete, tile,

and steel. The corridors have terrazzo floors; the stairs are made of steel, with terrazzo treads.

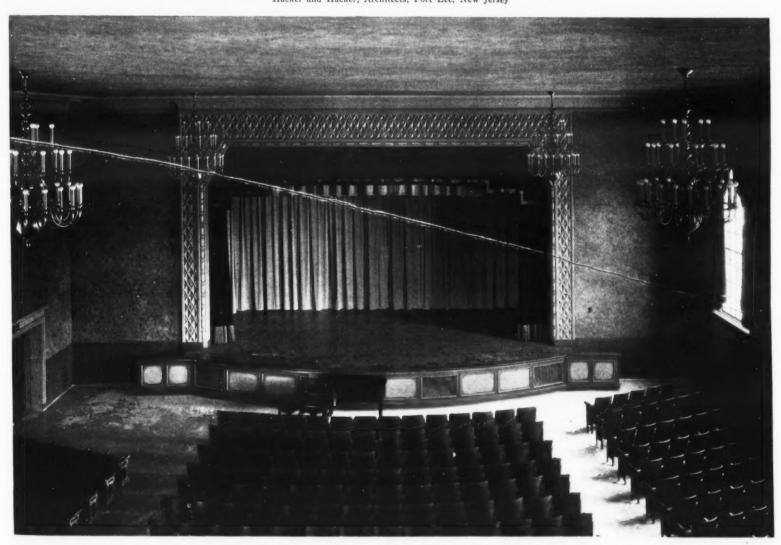
The classrooms are fitted with composition floors. The auditorium has a concrete floor and the domestic-science department has hard maple floors. All of the rooms are plastered. The classrooms have cork bulletin boards and ample blackboard space. The toilet rooms have terrazzo floors, with sanitary base, tile wainscoting, and marble steel partitions.

The building is heated by a vacuum-steam system, with thermostatic control. There is full electrical equipment for lighting, interroom telephone connection, visual instruction, and a

public-address system.



AUDITORIUM ENTRANCE, DUMONT HIGH SCHOOL, DUMONT, NEW JERSEY Hacker and Hacker, Architects, Fort Lee, New Jersey



AUDITORIUM, DUMONT HIGH SCHOOL. DUMONT, NEW JERSEY Hacker and Hacker, Architects, Fort Lee, New Jersey

The building has been planned with the gymnasium-auditorium wings set well forward, so that the entrances are close to the street walks. The basement has been limited to the spaces under the gymnasium and the auditorium, and provides room for shops, boiler rooms, and the

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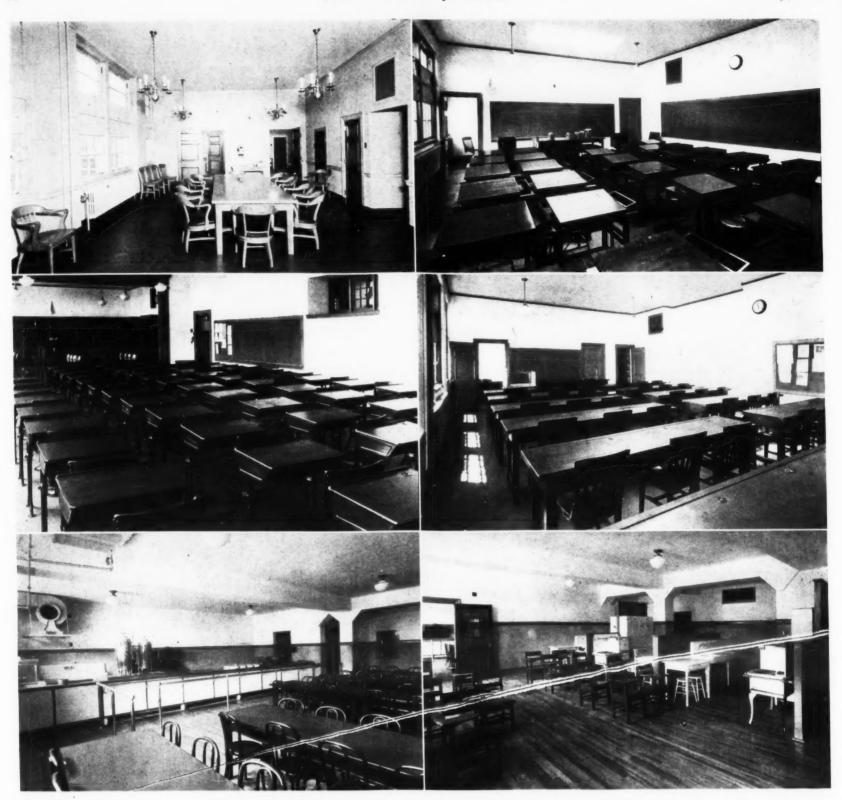
am full elel a school cafeteria.

The main floor contains the administrative offices for the city school system, seven classrooms, lockers, and toilets, and the main floor of both the auditorium and the gymnasium.

On the second floor there are eight class-

rooms, a large combination study hall and reference library, locker rooms, etc. The third floor includes laboratories and a drawing room.

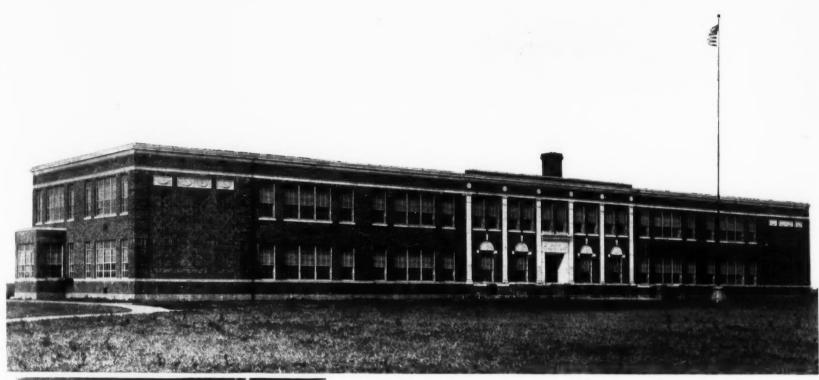
The architects have given special attention to the design and equipment of the auditorium, which serves various local community needs.



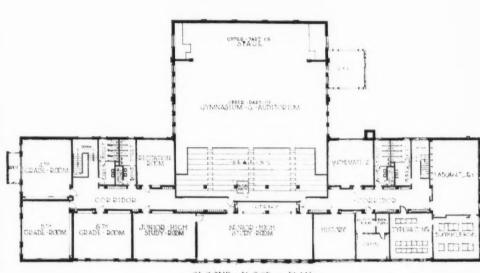
INTERIOR VIEWS OF THE DUMONT HIGH SCHOOL, DUMONT, NEW JERSEY
Hacker and Hacker, Architects, Fort Lee, New Jersey
TOP: Superintendent and Board Room and Freehand Drawing Room; CENTER: Study Hall and Library and Biology and General Science Laboratory;
BOTTOM: Cafeteria and Cooking Room



DUMONT HIGH SCHOOL, DUMONT, NEW JERSEY Hacker and Hacker, Architects, Fort Lee, New Jersey



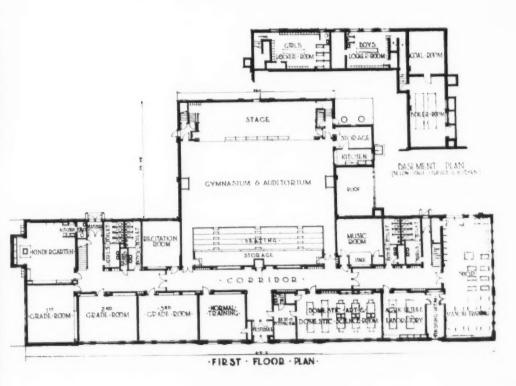
MONTEZUMA CONSOLIDATED SCHOOL, MONTEZUMA, IOWA Proudfoot, Rawson, Souers and Thomas, Architects, Des Moines, Iowa



SECOND - FLOOR - PLAN



INTERIOR VIEWS OF THE MONTEZUMA CONSOLIDATED SCHOOL, MONTEZUMA, IOWA Proudfoot, Rawson, Souers and Thomas, Architects, Des Moines, Iowa TOP, Science Laboratory; CENTER, Library Study Room; BOTTOM, Corner of Typical Classroom



MONTEZUMA CONSOLIDATED SCHOOL, MONTEZUMA, IOWA Proudfoot, Rawson, Souers and Thomas, Architects, Des Moines, Iowa

A Complete Low-Cost School

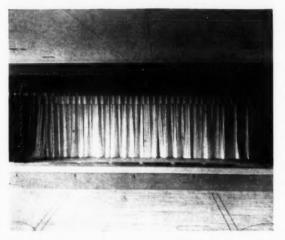
Oren R. Thomas, A.I.A., Des Moines Ia.

School officials confronted with an extensive building program are invariably emphatic in their insistence that the architectural and educational engineering service be in competent hands. They select experts in these fields, who have had experience in similar projects, in order that the proposed buildings will be planned and constructed to fit their particular use with the least waste and extravagance.

Quite often, however, the school officials charged with the responsibility of constructing a small unit, or a village school, do not realize the value of using qualified authority. The result is that an alarming number of such buildings are poorly planned and contain materials and conveniences that are extravagant and ill adapted.

The new twelve-year school, recently completed at Montezuma, Iowa, is an outstanding example of what may be realized by skill in planning and proper selection of materials for a particular problem. It proves that utility and art may be realized in the small, as well as the large building, and that permanent construction and complete equipment may be secured at a low cost.

The average cost per square foot of floor area for school buildings in the Iowa territory is



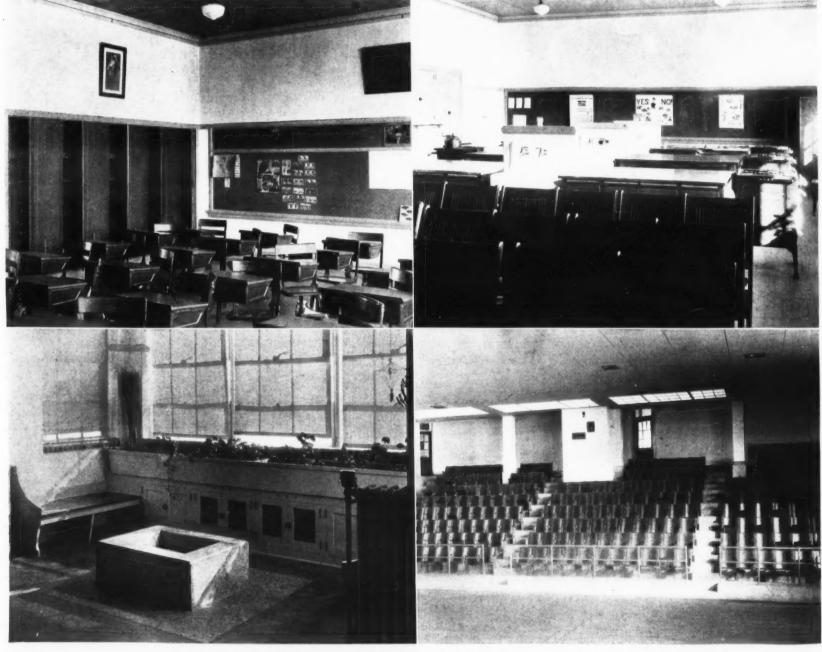
VIEW OF STAGE SHOWING CYCLORAMA SET-TING AND VELOUR FRONT CURTAIN, MONTEZUMA CONSOLIDATED SCHOOL, MONTEZUMA,

about \$5. If by skillful planning and arrangement of departments, the area of an average classroom is saved, the economy will be \$3,000. If a corridor is reduced in area 100 sq. ft., the resultant saving is \$500 on each floor level.

An example may be easily taken from the Montezuma School: The requirements called for a lunchroom, a large stage, and seating for basketball for 800. It will be noted that the plan allows the stage to provide for all these requirements. If this varied use of the area were not possible, it would have been necessary to provide a stage and lunchroom, with a minimum combined floor area of 1,800 sq. ft. A saving was, therefore, effected on this item alone of \$9,000, even with a large allotment of space for each use.

The area of all corridors in the Montezuma School is 4,178 sq. ft., or 12 per cent of the total area. The committee has concluded that a building is well planned in corridor allotment, if the area does not exceed 20 per cent of the total. The difference in the area allowed by this standard, and the area actually used in this building, is 8 per cent, or 2,300 sq. ft. This item alone shows a saving of \$11,500.

Cubic-content costs of buildings are affected by the type of construction, class of materials, standarization, competition, simplicity of design and plan, etc. The per-pupil cost of buildings are affected by both the cubic-foot cost and the efficiency of the plan. The building with a low cubic-foot cost, consistent with good construction and a low per-pupil cost due to a small area allotment for each pupil, with facilities for an



INTERIOR VIEWS OF THE MONTEZUMA CONSOLIDATED SCHOOL, MONTEZUMA, IOWA
Proudfoot, Rawson, Souers and Thomas, Architects, Des Moines, Iowa
TOP, View Toward the Rear of Typical Elementary Classroom and Home Economics Department; BOTTOM, a Corner in the Kindergarten and View Showing Seating in the Auditorium-Gymnasium.

39

Reinforced concreteBrick and tile

Reinforced

Fireproof

enriched and flexible curriculum, is truly a

The school at Montezuma houses the entire school enrollment of the district, including a kindergarten, grades, and senior high school. An outstanding feature of the plan is the segregation of various school units, in order that their varied programs and activity may not conflict. The elementary classes and the junior high school are housed on both floors of the left wings of the building. The senior high school is provided for in the right wing. The auditoriumgymnasium, a restroom, the library, and a music room, are in the center of the building accessible to all groups without conflict. The lower grades have their own entrance, stairs, and general toilet rooms; the high school, likewise, has independent entrances, etc.

The auditorium-gymnasium may be used by the public after school hours, without access to the other portions of the building. Doors are provided in the ground-floor corridor to accomplish this feature. The room is of the combination type, with a large stage and permanent seating. The room seats 900 for auditorium purposes, and 800 when used for gymnastic games. Portable bleachers are used on the stage for basketball games, giving seating at both sides

of the playing floor.

The seating in the front is of the opera-chair type, on steps that raise to the second-floor level. These chairs are used for both auditorium and gymnasium seating, as well as for school assembly and visual instruction.

The boys' and girls' locker rooms, located under the stage, have outside entrances and are used for stage dressing rooms. The stage has a threefold use: stage, basketball seating, and lunchroom. A kitchen, with serving counter, is near the stage, for serving lunches and banquets to the stage or gymnasium floor.

The music room is equipped with stage, stereopticon outlet, and storage rooms. Its walls and

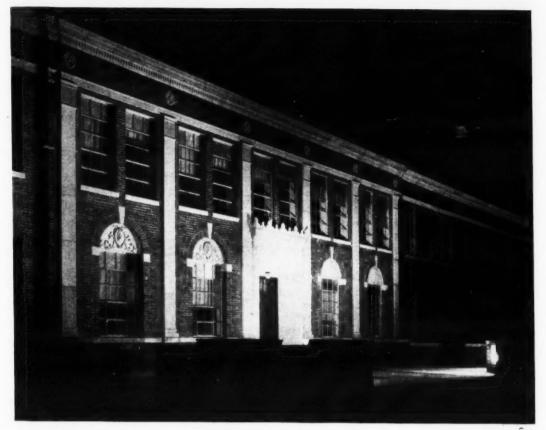
ceiling are soundproof.

The shop has large double doors leading to the outside grade. Tool and finishing rooms are adjacent. The agriculture laboratory is placed adjoining the shop for convenience of supervision. Large doors lead to the shop, to allow admission of farm implements.

The home-economics department consists of one combination room, easily converted from a food laboratory to a serving room. A combination rest and fitting room is adjoining, with private toilet.

The junior-high-school home room is near the library study room and the recitation rooms.

The science laboratory is equipped with



DE SHOWING ARRANGEMENT OFFLOOD LIGHTING AT THE TERRACE WALLS, MONTEZUMA CONSOLIDATED SCHOOL, MONTEZUMA, IOWA Proudfoot, Rawson, Souers and Thomas, Architects, Des Moines, Iowa

Kitchen

otings and foundations...

Floor and roof construction.

Finish floors (corridor Finish floors (rooms)...

Doors

TOTAL.

(corridors)

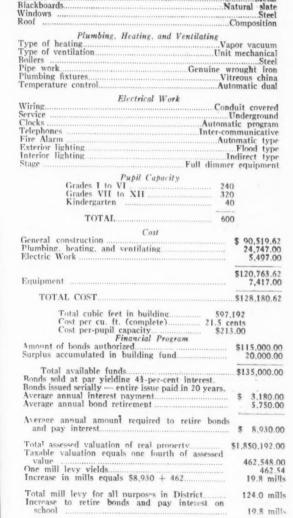
General Construction

tables suitable for experimental and lecture purposes. The commercial department consists of two rooms, separated by a glass partition.

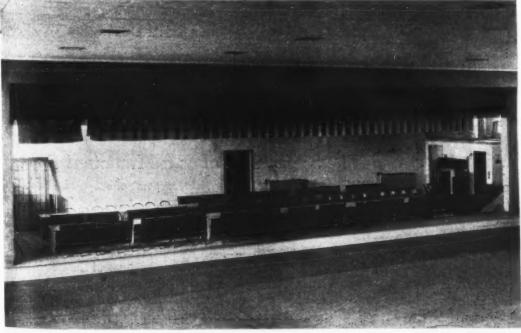
The building as a whole is one of the most complete in the territory and provides adequate facilities for an enriched curriculum and for ease of administration. Due to its simplicity of plan and design, and adherence to standards of building construction, the building was constructed at a very low cost.

Contracts awarded March 22, 1928.

	Sche	dule o	Room	15	
Kinderga	ten				
Elementa	ry-grade				
	gh-school				
History	******************				
Mathema	tics				
English	***********				
Normal	training				
Commerc					
Science					
Home E	conomics				
Agricultu	re				
Offices					
Restroom					
General	toilet roo	ms			
	ım-gymna				
	rooms				



Taxpayer now paying \$100.00 total tax will pay \$116.00
Taxpayer now paying \$50.00 total tax will pay \$8.00
Taxpayer now paying 150.00 total tax will pay 174.00
Taxpayer now paying 200.00 total tax will pay 232.00



STAGE, MONTEZUMA CONSOLIDATED SCHOOL, MONTEZUMA, IOWA Proudfoot, Rawson, Souers and Thomas, Architects, Des Moines, Iowa

School Board Journal

EDITORS:

WM. GEO. BRUCE



WM. C. BRUCE

Adequate School Support and Methods of Taxation

M UCH is being said from time to time about the inadequate support which this or that school unit receives, and the ways and means that must be devised to remedy the situation. Few of these discussions, however, go to the bottom of the problem; namely, to deal with the subject of taxation.

The educator argues the case with an impressive finesse, and establishes the fact that if the schools are to perform their task efficiently and completely, they must also enjoy a better financial support. Up to this point he has convinced his hearers. And then concludes by leaving the question of an increased tax revenue to the legislator and the tax official. And here the educator usually fades out of the picture.

If the existing mode of taxation permits an increased revenue without becoming oppressive, well and good. If, however, it involves the discovery of new tax sources, the question of a better school support comes to a dead stop. The legislator and tax official are not inclined to discuss innovations in the tax machinery or to look for new tax sources. Besides, he may hold that the present burden is already heavier than the traffic will bear.

The State of Illinois in its struggles for adequate school support illustrates the point. Many school districts are in financial distress. Chicago is battling with a \$21,000,000 deficit. The governor has been asked to call a special session of the legislature in order to afford relief. He declines upon the plea that the tax rate is already too high, that 85 per cent of the taxes paid in the state are taxes on real estate, and that it would be wrong to impose any further burden upon that class of property.

Then he advances this statement: "The enormous wealth of the state represented by 'intangibles' such as securities, pay proportionately very little tax. Theoretically, these values are taxed, but actually they contribute but little to the revenue. Our constitution was drafted when Illinois was essentially an agricultural state. Most of the property was in land and the products of labor — houses, barns, and farm implements. Since that time the character of our wealth has materially changed. But the land, houses, and barns (and he might have added, their equivalents in city real estate) still bear the burden of taxation."

All this is true as far as it goes. But, does it go far enough? Does this close the discussion? What is the answer? And who should make it? Most assuredly there is an answer, and it is up to the educator, the man who is earnestly concerned in an adequate school support, to offer that answer.

The champion of education who knows something of the science of taxation will promptly assert that the property tax, as exemplified in this country, is an outworn instrument no longer practical under present-day conditions, and superseded in the leading countries of the world by more effective devices.

Long years of experience in the field of taxation has demonstrated that the old property tax is inequitable in operation, and unsatisfactory in results. It is based upon the market value of tangible property, and the millions of parcels of land sold each year for delinquent taxes constitute a startling indictment of the property tax. Add to this the fact that the taxation of intangible property is a notorious failure, and you have the whole story.

All this leads us to the inevitable conclusion that the solution must be found in a graduated income tax, based upon man's ability to pay taxes, rather than upon the sales value of the property he owns. A man may have property holdings which yield only a nominal tax, while his operations in the field of industry, commerce, or the professions, may

yield him a large income upon which he pays absolutely no taxes. This illustration may be amplified a thousandfold.

Thus, there is a conclusive answer to the statement so frequently advanced that the property tax will not bear heavier burdens. It is up to the informed educator to submit the answer.

Some Vexatious Problems in School Administration

THERE are many problems which confront the school administrator. Perhaps that of finance rises more frequently and causes greater anxiety than any other. A shortage of funds blocks the most desirable projects. Laudable departures and innovations must come to a dead stop when it becomes clear that the finances are exhausted.

The popular way of denying the construction of a new schoolhouse, an increase in salaries, or the introduction of some highly needed broadening of the school program, is simply to hold that "we have no money." That statement squelches new plans and projects, and aspirations and ambitions, quicker than any pertinent argument or discussion.

"The problem now facing the school board is as old as mankind," said the Peoria, Illinois, Star in a recent issue. "The board finds its expense greater than its income and does not know what to do to increase its income. It is true that it could decrease its expenses, but it would be at the expense of the educational facilities of the City of Peoria. In other words, night schools, or kindergartens, or some other branch of the work, heretofore considered essential, will have to be discontinued."

A board of education may not only be prevented from entering upon a policy of expansion because of a lack of means, but it may also find itself compelled to engage in a policy of retrenchment. There may be a decided gap between the school budget and the finances at command to carry out that budget. The Illinois editor philosophizes over the subject in a sensible fashion. He says:

"The question is therefore very simple. Do the voters want to handicap the school system or do they want to raise enough money to keep it up to the present standard. The Star realizes the natural reluctance of the individual to paying more taxes, or indeed to paying any taxes at all. It would be a fine thing if we could have all the advantages of government, education and recreation, fire and police protection, paved streets, and parks and all the thousand-and-one advantages that go to make urban life so pleasant, without paying for them. But unfortunately, we cannot have them unless we pay for them, and we cannot keep the schools running at the peak of efficiency calculated to give the rising generation every advantage unless we raise a little more money each year."

The school authorities thus confronted with a financial dilemma must do one of two things. They must either resort to a policy of rigid retrenchment, or else come courageously before the public in a demand for more funds.

The latter course depends, on the one hand, upon the urgency of the school needs, and the tax ability of the community on the other. If the taxable wealth of the community permits the exaction of a large tribute for school purposes, then it is clearly upon the school authorities to make the demand, provided, of course, that the claims of the school system are legitimate and can be clearly demonstrated.

And here it need merely be added that, if the school board's case is properly presented to the public, the response is usually favorable. Experience has demonstrated that the American people want their schools maintained upon a high plane of efficiency, and stand ready to pay the cost when shown that that cost is a legitimate one.

The School System as a Municipal Entity

THE status of the school system, in point of scope and function, is no different in one community than it is in another. The local board of education is usually left free within certain legal limitations to administer the schools in accordance with its own plans and policies without interference by other municipal agencies. As a rule, that body has full authority to say how the funds placed at its disposal shall be expended.

The variation as to the authority of a school administrative body begins when it comes to a determination as to the amount that shall be expended for school purposes. It is here that the limitations begin to assert themselves. Various kinds of checks and safeguards are provided. Someone holds the purse strings. In one state the restrictive power may

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be lodged with a city council, in another with a board of estimates, and still another in a state statute.

These safeguards have been wisely instituted, not in the thought that a board of education cannot be trusted, but because there must be an adjustment between the various expenditures by municipal government based upon relative needs and the financial ability of the tax unit. In most states the law provides that boards of education be relieved from all responsibility in the levying and collection of taxes for school purposes. The machinery employed for the collection of taxes for all local purposes usually include those required for the administration of a school system.

Those identified with local government, in an administrative and legislative capacity, are also held directly responsible to the voting public for the volume of taxes exacted. This responsibility necessarily carries with it the authority as to the amount that shall be expended for any given purpose. At any rate, the power to determine what the tax rate shall be is not lodged with the board of education.

The question was recently raised in Minneapolis as to the powers vested in the board of education in the matter of exacting an adequate tax rate. The attorney general ruled that the board of education was not an independent principality empowered to set the tax rate, regardless of its relation to the other tax levies needed for carrying on municipal activities. He also ruled that the local board of estimates and taxation was created to correlate the financing of all municipal agencies, and that the board of education must abide by the decrees of that body.

While sharp differences of opinion may arise between those who must plan school budgets and those who control the public exchequer, it follows, nevertheless, that the needs for school purposes must be adjusted in accordance with the needs of other divisions of the local government. Every tax unit has its limitations. The general public makes larger demands upon government than it ever has before and the adjustments between the several administrative agencies are not always readily determined.

The circumspect, thoughtful, and diplomatic board of education that presents its financial needs, together with its plans and purposes in an explicit and convincing manner, usually gets what it seeks. At any rate, in approaching its budget it cannot wholly ignore the demands which the public may make in directions other than support for the public schools.

Small Rural and Urban School Systems

THE impression is frequently gained that a small school system is merely a fractional part of a larger system, or else that the problems which confront the small school district are wholly unlike those which afflict the large city system. Again, there are those who believe that a large school system, having liberal funds at command, are freer to carry out a comprehensive school program.

When all things are weighed and measured it develops that, in the main, the problems are alike in both the small and the large school system. The question of finance, adequate schoolhousing, the employment of professional service, the relation of community and school, and the like, does in nowise differ between the rural school plant and that of the urban center. It is simply a question of degree.

There are problems, however, which grow out of the bigness of things as well as those which are due to the smallness of size. The rural-school-district trustees may have all the funds they require to run the one-room school, but may have some difficulty in attracting efficient teacher talent. The urban system may have access to the ablest professional service and not have sufficient schoolhousing, or the means to supply them.

Some of the troubles which harass the rural-school trustee are simply multiplied a hundredfold in the larger system. These troubles, or call them exigencies, may vary in volume, but not in kind. In the nature of things, the administrative problems assume a simple form on the one hand, while they may be involved on the other. The scope and function of the rural-school trustee does not differ from that of the member of the city board of education. The one governs in an immediate way while the other delegates authority. The status, nevertheless, is the same.

There is this to be said, that the larger school system meets with a greater variety of problems, and because of that fact serve as a guide to the smaller school system that encounters such problems with less

frequency. Thus, it follows that an urban school system may enter upon projects, engage in experiments, and reach solutions and conclusions through which the smaller may well profit.

On the other hand, it should be remembered that every school system, be it large or small, is a complete entity which must work out its own salvation in its own way. Environment differs, public sentiment varies, and conditions are not the same in every community. Laws and regulations must be enforced with intelligence and judgment. The human touch must supplement the machinery which is employed to operate the school system if complete efficiency is to be obtained.

School Textbooks and Power Propaganda

A VERITABLE flood of sensational newspaper and magazine articles, decrying the propaganda entered upon by the power interests, greeted the nation during the past year. It was charged that college professors had been hired to write articles and deliver lectures in defense of the power interests, that newspapers had been subsidized by utilities corporations, and that tons of power propaganda literature had been distributed in the public schools of the land.

The issue, briefly put, centers upon the public versus the private ownership of public utilities. The charges, as applied to certain college professors and a few daily newspapers, were in some instances substantiated. The assumption here, after a lapse of some months, is that the evil complained of has, as the result of exposures, been effectually eliminated.

We have not, however, been so much concerned with the indictment hurled against college professors and the newspapers as we have with the sensational charge that tons of public utilities literature had gone into the schools of the country and that the textbooks used in the schools had been contaminated with harmful propaganda. We calmly awaited the evidence. No doubt, if the charges were true, the proof would come to the surface. An alert public press would be certain to locate school books that contained objectionable material, and at the same time would denounce the school officials that permitted their use in the schools.

Well, there had been plenty of hue and cry, and startling revelations were predicted. But nothing happened, simply because the suspicion that something was wrong finally proved groundless. School textbooks were not contaminated with propaganda of any kind. They were and still are clean, wholesome, and utilitarian.

The textbooks used in the schools of this country are subjected to a reasonable scrutiny on the part of those who are held responsible for their adoption and use. On the other hand, the modern educational publisher is not likely to admit material into his books that is not founded upon fact, that is controversial in character, or seeks to make propaganda for this, that, or the other cause. Ordinary business acumen and common sense will prompt him to keep his product free from all questions likely to arouse antagonism or cause controversy. And where the statement made in a textbook is challenged it is also found that the author is able to defend his case, and prove the truth of his assertion.

Finally it must here be said that the textbook used in the schools of this country are on the whole well conceived, ably written, and hand-somely produced. They serve the purpose for which they are made in an acceptable manner, and will measure up favorably to the highest test that may be applied to them.

"The tendency is to lengthen the school day so that children in the elementary-school grades may have more time for play, physical training, and handwork, and so that high-school pupils may have more time in school for study and for extracurricular activities." So reports the United States education office. Of 800 cities reporting, 84 have within the past two years lengthened the elementary-school day, 102 the junior-high-school day, and 122 the senior-high-school day. The usual increase in the elementary schools has been 30 minutes, and in junior and senior high schools 30 or 45 minutes.

High spots in real educational achievements are not confined to any one educational unit; they are found in the junior high school, the senior high school, and in colleges and universities. Wherever they are found they should be fostered and supported by all educators.—Ross O. Runnels.

America's next move is to raise its character as it has its office buildings.—Roger Babson.

School-Bond Interest Rates Continue Lower

Index of School Bond Prices'

Harold F. Clark, Teachers College, Columbia University, New York, New York

School bonds continued to decline in net interest rate during the month of December. The net interest rate on all school bonds sold in December was 4.74 per cent. This compares with a net interest rate of 4.85 per cent for November. This is the third consecutive month that interest rates on bonds have fallen. After reaching a high point for recent years in July and September the index declined .02 of 1 per cent in October, .13 of 1 per cent in November, .11 of 1 per cent in December. This is a total reduction of .26 of 1 per cent during the three months. The index now stands at a lower point than at any time since February, 1929.

Many school districts took advantage of the improvement in prices to sell bonds. The total sales of school bonds in the month of December being over twenty million dollars. This is one of the largest totals in recent months. The school board

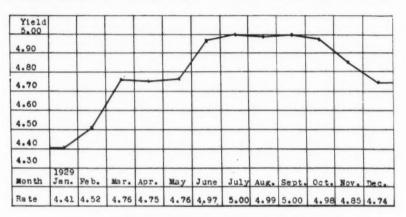


TABLE I. AVERAGE YIELD OF ALL SCHOOL BONDS SOLD DURING THE MONTH

which is facing the question of issuing bonds in the near future is primarily interested in the prospects for bond prices. The following quotation from Leonard B. Ayres states the probable situation very satisfactorily:

"The bond market has been advancing in recent weeks, and there is good reason to believe that it will continue to advance as interest rates decline. It may well be, however, that the duration and extent of the advance in bond prices will prove to

be mildly disappointing." If a school board plans to issue bonds and build a building, there are sound reasons why it should be done immediately. As the quotation from Ayres shows, bond prices may work to slightly lower levels over the next few months, but in any building program the price of buildings must be considered as well as the price of bonds. The price of building material has been declining in recent

weeks. The index of the price of school buildings TABLE II Amounts and Yields of Bond Issues²

1	School	bonds	sold dur	ing the	month	
2	All mu	unicipal	securitie	es sold	during	
	year (to date)			1,456,000,000

3. All school bonds outstanding (estimated) . 3,265,000,000 4. Average yield of all school bonds out-

4.65% standing (estimated) ... Yield of school bonds of ten large cities 4.41% 6. Yield of United States long-term bonds 3.40% (quotation the middle of November).

²The mouthly total of school bonds does not include all the bonds issued in the month, due to the difficulty of ob-taining the yield on some of the issues.

has declined substantially during the past month. In addition, there is every reason from the broad social and economic standpoint why building should be pushed forward at this time to advance the program advocated by President Hoover. Needed public construction should be pushed forward as rapidly as possible.

The total sale of municipal bonds was unusually large in the month of December, being almost \$300,000,000. A large part of this total was caused by a \$65,000,000 issue in New York City and a

TABLE IV Average Yield of Long-Term Federal Government Bonds⁵

Past Twelve M	Aonths	Past Six Years
1930	Rate %	Year Rate %
Jan	3.376	1928
1929	Rate %	19273.464
Dec	3.406	1926
Nov	3.456	1925
Oct	3.67	19244.010
Sept	3.70	19234.298
Aug	3.72	19224.301
July	3.67	
June	3.71	
May	3.67	
April	3.67	
Mar	3.76	⁵ Taken from Federal Re- serve Bulletin.
Feb	2 66	serve Bulletin.

by the tendency toward lower and lower interest rates. It will be noticed that the current rate is far lower than at any other time during the past year. The downward tendency seemingly is not fully checked.

Table V shows that the price of stocks has been fairly steady since the October-November break, when monthly averages are considered. The final average for December will not differ by three points from the November figure, and January is not likely

TABLE VI Revised Index Numbers of Wholesale Prices

Twelve I	Months	Past Six Years			
All Com-	Building		All Com-	Building	
modities	Materials	Year	modities	Materials	
		1928	97.7	93.7	
93.910	95.810	1927	95.4	93.3	
		1926	100.0	100.0	
94.210	95.710	1925	103.5	101.7	
94.410	96.010	1924	98.1	102.3	
96.3	97.8	1923	100.6	108.7	
97.5	97.5				
97.7	96.7				
98.0	96.7				
96.4	96.4				
95.8	96.8				
96.8	97.9	077		v) (
97.5	97.8				
96.7	97.5			100	
	All Commodities 93.910 94.210 94.410 96.3 97.5 97.7 98.0 96.4 95.8 96.8 97.5	94.210 95.710 94.410 96.010 96.3 97.8 97.5 97.5 97.7 96.7 98.0 96.7 96.4 96.4 95.8 96.8 96.8 97.9 97.5 97.8	All Com- Building modities Materials 1928 1927 1926 1926 1926 1926 1926 1926 1926 1926	All Com- Building modities Materials 93.910 95.810 1927 95.4 1926 100.0 94.210 95.710 1925 103.5 94.410 96.010 1924 98.1 196.3 97.5 97.5 97.7 96.7 98.0 96.7 96.4 95.8 96.8 96.8 96.8 97.5 97.5 97.8 PUnited States Labor Statistics.	

to differ by that much from December. The average price of 60 bonds, as shown by the table, continues its upward trend from the low point reached in September.

Table VI shows that the tendency toward declining prices for all commodities has not yet exhausted itself. Building material as well shows a tendency toward lower prices.

TABLE III Bond Sales and Rates

Bond Sales			Average Rates		
Year	Schools	Municipal	All Public and Private	Year	Municipal
1928	\$240,000,0004	\$1,413.000,0004	\$ 8,000,000,000	1928	4.45
1927	266,000,000	1,509,000,000	7,735,000,000	1927	4.49
1926	260,000,000	1,365,000,000	6,311,000,000	1926	4.61
1925	323,000,000	1,399,000,000	6,223,000,000	1925	4.58
1924	288,000,000	1,398,000,000	5,593,000,000	1924	4.26
1923	206,000,000	1,063,000,000	4,303,000,000	1923	4.76
1922	237,000,000	1,101,000,000	4,313,000,000	1922	4.81
1921	215,000,000	1,208,000,000	3,576,000,000	1921	5.18
1920	130,000,000	683,000,000	3,634,000,000	1920	5.12
1919	103,000,000	691,000,000	3,588,000,000	1919	5.04
1918	41,000,000	296,000,000	14,368,000,000	1918	4.90
1917	60,000,000	451 000,000	9,984,000,000	1917	4.58
1916	70,000,000	457,000,000	5,032,000,000	1916	4.18
1915		498,000,000	5,275,000,000	1915	4.58
1914	42,000,000	320,000,000	2,400,000,000	1914	4.38
³ By special permis ⁴ Not final.	ssion, based upon	sales reported by the	Commercial and Financia	1 Chronicle.	

\$41,000,000 San Francisco issue and very large issues in two or three other cities. The New York issue sold on a net basis of 4.35 per cent; the San

Francisco issue on a net basis of 4.50 per cent. Table IV shows that long-term Federal Government bonds are increasing in price. This is shown

> TABLE V Security Prices and Yields7

	Average Price of		Average Yield on 60 High-
Date	393 Stocks	60 Bonds	Grade Bonds
1930	4 2 4 4 9	46.68	4.628
January	154.3°	46.68	4.638
December	153.78	96.58	4.648
November	151.1	95.7	4.70
October	201.7	95.1	4.73
September	225.2	94.8	4.76
August		95.0	4.74
July		95.2	4.73
June		95.3	4.73
May		95.7	4.70
April		95.8	4.69
March		95.8	4.698
February		96.3	4.65

⁷As reported by Standard Statistics Company, Inc. Used by special permission.

8Not final.

THE TENURE OF COUNTY AND CITY SUPERINTENDENTS IN ILLINOIS

The state education department of Illinois has made a study showing the changes in the county superintendency of the 102 counties of the state over a period of twenty years, from 1907 to 1927; also the changes in the city superintendency of 102 cities of 4,000 or more population during the same

The study shows that there were a total of 221 changes in the county superintendency and 234 changes in the city superintendency.

During the first four-year period, 39 county superintendents, and 45 city superintendents were changed: during the second four-year period, 44 county superintendents, and 55 city superintendents were changed; 31 county superintendents, and 45 city superintendents were changed during the third period; during the fourth period, 58 county super-intendents, and 56 city superintendents were changed; and during the fifth period, 39 county superintendents, and 33 city superintendents were changed. A total of five counties reported no change during the twenty years. Thirteen cities reported changes in the city superintendency amounting to four, and fourteen reported three changes in office. Nine cities had no change in the superintendency.

¹Copyright by Harold F. Clark.

America's Greatest Educational Gathering

What might readily be termed the most imortant and, at the same time, the largest eduational gathering of the year, is staged to take lace at Atlantic City, New Jersey, February 2 to 27, 1930. It will bring together a remarkble assemblage of those who direct the educaonal destinies of the country.

The occasion is the annual meeting of the Department of Superintendence of the National ducation Association. The programs of the onvention are designed to promote the theme Education is the Spirit of Life" and to give full nphasis to the significance of that phrase. The m will be to interpret what education can do, and should do, in order to be in harmony with ne highest ideals of life.

The first general session will be held on Saturday afternoon, February 22, at which time the exhibits of all types of educational supplies and equipment will be formally opened. On Sunday afternoon there will be a vesper service, and a general session will be held in the evening at which the opening addresses will be delivered.

The Convention Themes

The gathering will get to its real task on Monday morning when the theme of all discussions will bear in mind that education must develop a social spirit. They will deal with typical

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tional exhibits would indicate an appreciation for the tools and paraphernalia employed in the processes of education.

The official opening will be made by Mr. Frank Cody, superintendent of the Detroit schools, president of the Department of Superintendence. Mr. Frank Bruce will preside. Two hundred and thirty-four firms and organizations will occupy the 344 exhibition booths which will cover the great auditorium at Atlantic City, said to be the largest of its kind in the world.

The announcement of the National Education Association says:

The exhibits at these conventions constitute an educational fair of great magnitude. Here superintendents will find on display the most recent educational contributions of inventive minds from both within and without the profession. The efficiency and cost of these educative tools and accessory devices may be compared, to the end that the school superintendent may bring to his community the best at the least expense.

Once a new idea in education meant a new textbook — today it means that and much more. Thousands of devices and supplies designed to supplement books in education will be on exhibit at this great educational fair. Building materials, school seats, sanitary supplies, laboratory apparatus, tools, plumbing, lead pencils, electric clocks, school busses, stickers, liquid soap, and calculating ma-



AIR VIEW OF ATLANTIC CITY, NEW JERSEY, WHERE THE DEPARTMENT OF SUPERIN-TENDENCE WILL MEET. THE AUDITORIUM IS THE BARREL-ROOFED STRUCTURE IN THE MIDDLE DISTANCE

relationships between pupil and teacher, between teacher and superintendent, between school and community, and between public and parochial schools.

On Tuesday evening the theme will be "Life is Recreative.

The Wednesday morning meeting will espouse "Education for Progress," and on Thursday morning the theme will be "Life is Cooperative: Education must itself cooperate." All addresses will be held within the scope and spirit of the theme announced. The speakers, in every instance, will be men and women of recognized standing and ability in the educational field.

Some fourteen allied organizations, covering specific labors in the field of education, have been invited to participate.

Exhibits of Books and Supplies

The fact that the first general session will concern itself with the opening of the educachines are a few of the hundreds of classes of articles listed for exhibit.

The movietone as an educational device will appear for the first time at the 1930 convention; the radio, the loud-speaker, and improved office equipment are significant exhibits. A large number of units of space have been reserved by seating companies, motor-bus manufacturers, makers of laboratory and other furniture, publishing concerns, map makers, and manufacturers of musical in-

TENTATIVE PROGRAM FOR THE DEPART. MENT OF SUPERINTENDENCE MEET-ING AT ATLANTIC CITY

ieth anniversary meeting of the Department of Superintendence of the National Education Association will be held February 22 to 27, at Atlantic City, N. J. Mr. Frank Cody, president of the Department, will preside.

The Program

Fourth Session — Monday, February 24

President's Address, Mr. Frank N. Cody, superintendent of schools, Detroit, Mich.



MR. FRANK CODY, Detroit, Michigan, President, Department of Superintendence

Friendliness in Pupil-Teacher Relationships, Mrs. Edith B. Joynes, president of the Department of Classroom Teachers of the National Education Association.

Friendliness in Teacher-Superintendent Relation-ships, Mrs. Susan M. Dorsey, Los Angeles, Calif. Friendliness in Relationships Between Public and Parochial Schools, Father J. Elliot Ross, State University of Iowa, Iowa City.

Friendliness in School-Community Relationships, Paul C. Stetson, superintendent of schools, Dayton,

Sixth Session — Tuesday, February 25

Anniversary Meeting: Achievements of Education Instruction, Prof. Charles H. Judd, University of Chicago, Chicago, Ill.

Administration, Mr. J. B. Edmonson, University of Michigan, Ann Arbor.

Organization, Mr. John H. Logan, superintendent of schools, Newark, N. J.

The School Plant, Prof. N. L. Engelhardt, Teachers

College, Columbia University, New York, N. Y.

Personnel, Mr. C. B. Glenn, superintendent of schools, Birmingham, Ala.

Finance, Mr. Frank W. Ballou, superintendent of schools, Washington, D. C.

Public Relations, Mr. Francis G. Blair, superintendent

of schools, Springfield, Ill.

Sixty Years of Progress, Introduction of Past Presidents and Honorary Members.

Group Meetings - Monday Afternoon, February 24 Group Three: Superintendents of Cities with Population of Less than 10,000, John L. Bracken, superintendent of schools, Clayton, Mo.

Group Four: Superintendents of Cities with Population from 10,000 to 50,000, Mr. A. W. Elliott, superintendent of schools, Mt. Vernon, Ohio.

Group Five: Superintendents of Cities with Population from 50,000 to 100,000, Mr. J. W. Sexton, superintendent of schools, Langing, Mich.

tendent of schools, Lansing, Mich.

Group Six: Superintendents of Cities with Popula-tion from 100,000 to 200,000, Mr. A. H. Hughey, superintendent of schools, El Paso, Tex.

Group Seven: Superintendents of Cities with Population over 200,000, Mr. William J. Bogan, superintendent of schools, Chicago, Ill.
Group Eight: City assistant and district superintendents, Mr. Arthur C. Perry, district superintendent of schools, New York, N. V.

of schools, New York, N. Y.

Group Nine: Health and Physical Education, Mr. James E. Rogers, New York, N. Y.

Group Ten: National Council of Childhood Education, Miss Lois Hayden Meek, Teachers College, Columbia University, New York, N. Y.

Group Meetings - Tuesday Afternoon, February 25 Group One: Instruction — Materials of Teaching, Mr. J. F. Noonan, superintendent of schools, Mahanoy

Group Two: Instruction — Methods of Teaching, Mr. C. H. Garwood, superintendent of schools, Harris-

Group Three: Instruction — Measurer George F. Arps, Ohio University, Columbus. Instruction - Measurement, Mr.

Group Four: Organization, Mr. Walter R. Hepner, superintendent of schools, San Diego, Calif. (Continued on Page 148)

Economy Through Efficient Business Management

H. P. Shepherd, Knoxville, Tennessee

School administration may be divided into two fields, educational administration and business administration. Mr. W. F. Reeder defines educational administration as that phase of school administration which is concerned with the teaching function, and business administration as that phase of school administration which is concerned with the procuring and spending of revenues on those aspects of school administration which are not directly related to classroom instruction. This brief distinction is made at the outset in order to set the limits of this discussion.

The business administration of the schools does not exist for itself alone. It should be recognized as a "service agency," providing the material setting in which the educational policies will develop. The services rendered by the teaching corps, as well as the standards of achievement of pupils, are conditioned by the kind of business management under which the schools operate. Adequate materials and equipment, comfortable and inviting quarters, and janitorial services conforming to high standards, are factors which will greatly enhance the teacher's incentive for superior teaching and the child's desires for learning. The interrelationship between the educational process and an efficient plan to finance it are so closely bound together that no attempt should be made to separate them. Rather, the two should be so closely coordinated, that sane economies, practiced in both fields, will make possible increased educational opportunities for boys and girls in vital directions.

The superintendent's need for good business intelligence in the interplay of these factors is especially evident in the management of money intrusted to his care. To this end, he should know and should utilize for the benefits of the schools the methods which good business men have found effective in the conduct of their business. As stated by Dr. Fred Hunter, at the Boston meeting of the Department of Superintendence, "One purpose of educational administration and business management is defensible, and one only; namely, the best provision for the teaching which the money provided will buy, when handled by a scientific and professional disinterested plan of administration. Good teaching for all types and classes of children, not professional reputation nor money profits, is the goal of school administration.

Urgent need for economies is found in the increased costs of education. This increased cost of education may be explained on the basis of the depreciation of the purchasing power of the dollar, growth in attendance, and because the schools have assumed, due to the demands of parents, many functions which formerly belonged to other institutions.

It has undertaken reform and welfare work, public health and recreation, and adult education. It has provided health clinics, gymnasiums, natatoriums, playgrounds, libraries, museums, moving pictures, free use of school buildings, Americanization, and lunches.

This demand for the education of more children and for a better quality of education, significantly explains the increase of expenditures. In spite of the legitimacy of the need for increased revenue, the taxpayer has a right to insist that all waste and inefficiency be eliminated. "They do not want high taxes, yet they crave the conveniences that make the taxes high. Making an adjustment to this paradox is the task before school officials." The school official's big job is to evaluate the whole program, selecting those things that must be carried forward at all events. Having selected those necessities,

he can determine others which the public can afford, and which it should willingly finance. Many times the public demands a curtailment along lines with which no conscientious school official can acquiesce if the rights of children are foremost in his thinking; certainly not acquiesce without pointing out to the public the errors of its judgment, and what the children will lose by such a policy. It behooves every official to show, if called upon, why every dollar is needed, and getting it, that it has not been wasted by poor business methods and bad stewardship.

The big question for every superintendent and school board to raise is: Are present methods of fiscal administration so perfect that no possible economies may be made to offset the increases in cost?

We should also keep in mind that there is a wide difference between imperatively necessary, and highly desirable, and we should see to it that we do not advance the desirable faster than we can educate the people to children's needs. True, many communities have been curtailing so many years that in order to gradually approach accepted practices, a great deal of education is necessary.

The Budget

The first essential, and the basis of all efficient school organization and management, is careful and scientific budget procedure. The planning of a budget is not a simple operation at any one time in the year, but rather a cycle of operations to be checked up in terms of last year's expenditures. A budget must be made in detail and justification for all needs clearly set forth. Budgets which must be approved by city councils should not be padded, but should include what the board and superintendent regard as the actual amount needed. In this way the board can defend each item of the budget. Otherwise, the council may get in the habit of making reductions, and as a result, seriously affect the very heart of the school program.

Once approved, the budget must be the guide for the expenditures of originally anticipated needs. No expenditures should be honored which are not included in the budget, or which overrun the budget in any department, except in case of an extreme emergency. However, the budget should not be the watchdog of the treasury, to the end that it runs the school and kills initiative. But, in efficient business management, one imperative question which should always be answered in the affirmative, before any expenditure is allowed is: Are there sufficient funds?

The 1923 booklet issued by the National Education Association on city-school expenditures, based on a study of 43 cities, gave these cities a median cost of \$2.35 per pupil for general control, \$0.97 per pupil for business administration, and \$1.38 per pupil for educational administration. General practice seems to indicate that general control should not run over \$3 per pupil for cities of 100,000, and that the expense of the business department should not run over \$1. When these two items exceed this amount an earnest effort should be made to find the

Buying and Distribution of Supplies

One of the greatest wastes lies in the purchase of supplies. To this end, supplies should be standardized and purchased according to exact specifications on competitive bid basis. Orders should be placed early enough to avoid peak production demands, higher prices, and late deliveries. A close checking should be made of

deliveries against specifications. Supplies from a central storehouse should be distributed by a standardized requisition plan. The allotment should be apportioned upon a per-pupil basis for either ten weeks, or a semester, thereby cutting distribution costs. An annual inventory of supplies and equipment may, and should be used as a basis for new orders, as well as a close check upon what has been misplaced, stolen, or carelessly wasted.

Cost Accounting

Cost accounting should be the basis of better budgetmaking. The only purpose of cost accounting is to discover where costs may be reduced, without impairing efficiency, these same findings may reveal under expenditures. There is almost no limit to the amount of bookkeeping which may be carried on, but such practices should be simple and so kept as to make available when necessary cost per building, per pupil, and per subject, checking these items with national norms and cities of the section. Such comparisons which are dangerous and misleading, possess no practical worth from which to draw conclusions, except to indicate relativeness in expenditures, until translated into terms of comparable program policies and practices.

Interaccounting includes student activities, activities of cafeterias, athletics, and entertainments, etc. These activities should be definitely organized and a uniform procedure of accounting practiced. A traveling auditor, under the board of education, should make monthly inspections of these accounts and check on procedure. Such a policy will yield economies, and merits more attention than now casually given it

Maintenance

Someone has said that from the day a building is accepted from the contractor "everything is on an irresistible march to the junk heap." Policies which can be set up to decrease the rate of depreciation will effect real economies.

Many cities are discovering the tremendous economies lost through structural defects. Vast amounts of public money could be saved through the development of a quality standard of workmanship. School officials who have gone through a large building program will recognize the importance of such a policy in terms of economies in maintenance. The policy of abandoning buildings when the maintenance and operation costs equal the maintenance and interest charge on a new building of equal capacity and utility is good business.

Too frequently, abandoned school buildings are allowed to go unsold for years at a time. It is poor business economy to allow money to be tied up, when it should be spent in districts in need of additions or new schools.

The rehabilitation program, cycled several years in advance, will insure more equitable distribution of funds, and a systematic check on depreciation. The tendency to cut maintenance appropriation, because it is usually the last to be spent, in order to provide other needs of the system, is not good business. These funds should be carefully guarded.

Systems which maintain shops for the manufacture of equipment maintain that the cost of furniture can be reduced one third over ready-

made articles.

One means of economy is regular and systematically recorded inspection of school plants for designating repairs which need immediate attention and are absolutely necessary, and those which are desirable but not absolutely necessary.

(Continued on Page 72)

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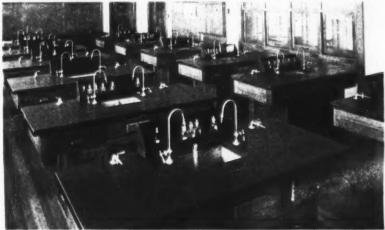
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BRANCH OFFICES

New York Office 70 Fifth Avenue



Grosse Pointe High School, Grosse Pointe, Michigan

Architect: George J. Haas, Detroit

Contractors: Carl S. Barry Company, Detroit



An attractive, efficient, convenient, homey School made "more so" by . . . Fenestra Windows of Steel

-For these better steel windows by their inherent beauty add grace, character, restraint to the architectural design and give the building advantages which involve the health, comfort, convenience of teachers, pupils and caretakers.

Of first importance are cheerful

and airy rooms due to the flood of daylight admitted by these better steel windows and to the fresh air so easily secured through easily operated ventilators which cannot stick or warp. Next, rooms that are weather protected by windows which close snug-tight against sudden showers and wintry blasts. Finally there are the practical advantages -fire safety, easy washing from within, convenient shading and

economical replacing of broken panes.

For those who have the responsibility of choosing school building materials, Fenestra literature has exceptional value. Demonstrations made upon request - no obligation. Call the local Fenestra office.

DETROIT STEEL PRODUCTS

COMPANY 2282 East Grand Boulevard DETROIT. MICHIGAN Factories: Detroit, Michigan, and

school windows

SCHOOL ECONOMY THROUGH EFFICIENT BUSINESS MANAGEMENT

sary; also an estimate should be made of the cost data on both types of repairs, checked against available funds. If repairs are made by outside firms, the inspection should precede the payment of the bill, as some workmen are dishonest, some are inefficient, and some are both dishonest and inefficient.

The all-too-common disrespect of pupils, and sometimes of teachers and janitors, for their school plant is astonishing. The plant was built for use but not abuse, and vandalism of every sort should be checked back to the pupil, and to the teacher of that pupil, if possible. Such offenders should be required to pay for the damage incurred. If schoolmen are skeptical about being able to teach pupils respect for school plants, let him visit the Lincoln, Nebraska, High School, which has been in use for 15 years.

Principals should be required to file monthly, with the time report of their schools, a statement concerning the condition of the building, both as to janitorial service, and the care of buildings on the part of teachers and pupils.

Operation Economies

Operation is the third-largest money activity - instruction and capital outlay exceeding it in cost. Operation includes engineering and janitorial service, fuel, light, gas, telephone,

The millions of dollars today spent for buildings and equipment demand janitors and engineers with technical knowledge; otherwise damages will occur to an irreparable extent. In addition to damages to capital outlay, a poor janitor may waste several thousand dollars' worth of operating supplies; while an efficient janitor may effect economies to that amount.

J. A. Garber states "that three fourths of the school systems of American cities still select their janitors on a 'trust to chance' basis." If economies are to be effected, cities should follow the Minneapolis plan of hiring janitors. This city requires all janitorial candidates to serve an apprenticeship under a skilled janitor and, at the end of the period of apprenticeship, to pass an examination.

There are four methods of payment of janitors and engineers - contract, flat, room, and service-schedule basis.

The chief point in favor of the contract basis is the economy effected in terms of money, but it is very doubtful whether the initial money economy compensates for the neglect of other factors. Cincinnati, one large city which has used this plan, has abandoned it.

The room basis of compensation has practically disappeared in the larger cities, due to the wide variation in the square feet of old and new buildings.

Service basis represents a scientific attempt to determine compensation upon the actual basis of work involved, with a careful job analy-

IS CORPORAL PUNISHMENT NECESSARY?

As a principal in my sixth year in the same school, I find myself growing away from the necessity of using corporal punishment. I have used it, but in each case as a last resort, and I am glad it has been used less and less each year. I appreciate more and more the teachers in the school who do not feel the need for using it. I think its use degrades the teacher and the school more than it corrects or trains the children.

-Nat G. Barnhart. Meadowview, Virginia. sis. This method should effect real economies, as well as more efficient service.

Since fuel is the biggest item in the operation of a plant, the coal should be paid for on the basis of heat-unit standards. This method will prevent poor coal being dumped on the school and will prevent overrunning the amount set up in the budget if weather conditions are not abnormal.

A systematic check-up from time to time should be made in the use of supplies, ranking each school building on the per-pupil cost for janitor supplies, educational supplies, for electric current, for water, etc. This type of a checkup enables the superintendent of buildings, as well as other persons involved, to criticize their own practice. This comparison should be based on the per-pupil unit rather than the dollarand-cents unit, as the cost of material fluctuates from year to year.

Capital Outlay

The expenditures in capital outlay - new buildings and grounds - ranks next to instruction in amount. Any economies which will effect a saving in one fifth of our total school funds are deserving of careful consideration.

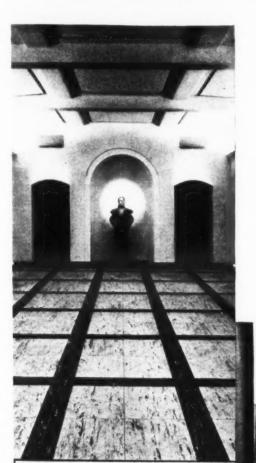
The acquisition of, or options on, real estate in unimproved sections should be made from five to ten years in advance of actual needs. Such a policy insures the best available sites at reasonable prices.

Buildings, planned scientifically, and erected and equipped according to uniform specifications, financed on a pay-as-you-go plan combined, when necessary, with reserve and bondissue plan, should be productive of economies. Economy is closely linked with sound construction, and adaptation to educational and community needs. The standard building represents economy of the first order. This standard, or typical, building should be flexible in design for (Continued on Page 74)

In the "City of Light" even the streets are paved with



SEALEX LINOLEUM



PUBLIC HALL

A handsome floor of Sealex Treadlite Tile, in black and white marble effects, is the principal decorative unit in this dignified interior. This floor was constructed tile-by-tile to a design by the architects, F. P. Platt & Bro THE "City of Light" is a model city (with streets you can walk on and "buildings" you can enter) built for the Westinghouse Lamp Company on a single floor of a New York skyscraper.

While the "City" is primarily an exhibit of scientifically correct lighting, it also demonstrates the value of modern resilient floors.

F. P. Platt & Bro., the well-known architects who planned this unusual exhibit, have used Sealex Linoleums and Sealex Tiles in a wide variety of designs and patterns. Each of the different types of interiors has a suitable floor—modern, attractive and comfortable underfoot.

Let us enter the school class-room

in the "City of Light." The floor installed here is of the same advanced type found today in so many of our finest educational centres, from kindergartens to universities... a Bonded Floor of Sealex Linoleum.

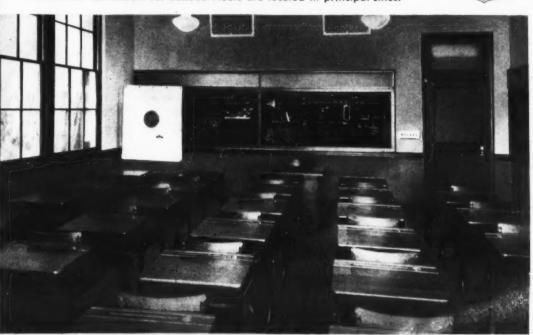
It is modernly colorful...quiet...comfortable. Economical too — for these long-wearing floors never require painting, varnishing or refinishing. A push broom or mop does for ordinary cleaning, and if things are spilled—ink, fruit juices, greasy foods etc. — they are wiped up without a trace of damage.

May we tell you about the Guaranty Bond which goes with BONDED FLOORS of Sealex Linoleum and Sealex Treadlite Tile?

CONGOLEUM-NAIRN INC.

General Office: Kearny, N. J.

Authorized Contractors for Bonded Floors are located in principal cities.



CLASS-ROOM

A two-toned floor of Sealex Jaspe Linoleum—cheerfully decorative without being obtrusive. This, like all Sealex floors, will keep its original good looks—it is spot-proof and stain-proof.

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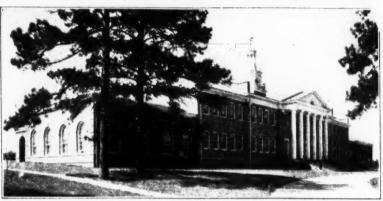
Libbey-Owens Glass the Accepted Standa

for School Buildings

THIRTEEN years ago Libbey-Owens perfected an exclusive process for manufacturing window glass that actually set a new standard for the industry. Architects, contractors and builders recognized in the Libbey-Owens product a vastly improved window glass and turned to the use of Libbey-Owens for fine buildings of every description.

Today, the roster of school buildings glazed with Libbey-Owens Glass stands as an impressive tribute to the unvarying high quality of the Libbey-Owens product.

School board executives and architects will do well to investigate the superiorities of Libbey-Owens Glass. Every light of "A" quality has Dodd College, Shreveport, La., Glazed With Libbey-Owens Gl.



been subjected to rigid inspection. It is exceptionally clear, and of rich, brilliant lustre. Careful annealing insures the absence of internal strains and brittleness, providing a glass that is less susceptible to breakage.

Specify Libbey-Owens "A" quality glass on your next building contract. The familiar L/O label that appears on each light is your guarantee of highest quality.

LIBBEY - OWENS GLASS COMPANY, TOLEDO, OHIO

(Continued from Page 72)

later additions or modifications to meet new ideas. The mild climatic conditions of some portions of the south necessitate less elaborate heating facilities than those farther north and, if closely checked, are productive of real economies.

Before making additions to an old school, the building should be scored from the standpoint of depreciation. Not infrequently one will find it economical to start a separate new unit, so planned that as new units are needed, the old can eventually be torn down. The first of the new buildings should be so planned as to provide the special features of a modern program, the playroom, library, auditorium, classrooms, etc.

Many school officials have not been sufficiently alive to the importance of eliminating waste and mismanagement. Others more sensitive to the financial stress in the running of the schools have effected significant economies. They have demonstrated that a more efficient administration of schools is possible by a close checking of the thousand-and-one opportunities for waste, and by efficient business procedures.

A recent questionnaire sent out to business managers of cities of 100,000 or more, brought replies indicating many types of business economies. Only a few of the more significant ones are here listed.

Overhead Economies

City A uses an addressograph especially designed to take off payroll, and to write all checks, except the signature, for which a signograph, signing five at a time, is used.

City B reports labor-saving short cuts — such as teachers paid in equal tenths, use of stamped window envelopes, use of carbon paper and matched forms for writing checks, remittances, advices, and check register in one operation.

Operation Economies

City C reports a saving of \$10,000 on operation this year. Janitors and engineers were paid in proportion to the amount of work to be done. The basic rate for janitor service is \$7.70 per 10,000 sq. ft. of floor space. Engineers have a basic rate of \$135 per month, with an adjustment for the larger plants.

The business manager adds that this plan is apparently working better than the old way.

City D discovered by close check-up that window washing took something like four days. This seemed too long, and after finding out the material used by the janitorial force — it happened to be a widely advertised household preparation — he substituted denatured alcohol. Now windows are cleaned in less than half the time.

This city was in the custom of paying out \$1,200 for freeze-ups before the business manager got on the job. In 1925 only \$12 was paid out on this account.

City F has saved \$2,000 annually in the fuel bill of the schools by checking up the efficiency of the boilers, covering heat pipes with asbestos, replacing broken windows, and weather-stripping windows and doors.

THE SCHOOL BUSINESS MANAGER

Every large business delegates some of its most meticulous workers, its keenest minds to research. The instructional side of the public schools has made an effort at research. Often the men who delve laboriously into statistics and carry on vast, nation-wide projects for new facts on education, do so without sufficient funds and without remuneration. No big business would tolerate such a situation. The public schools will do well to follow the lead of business and of the adventuresome educational researchers.

-H. L. Mills, Business Manager, Board of Education, Houston, Texas.

City G has made a study of the per-pupil cost in each school building on such items as fuel, janitor supplies, educational supplies, electric current, and water. The per-pupil cost of each of these items varied widely: Water costs, for example, ranged from 2 cents per pupil in one building, to 2.05 cents per pupil in another building. The principals, teachers, and janitors became wholesomely critical of their expenditures. By plugging a few leaks, the schools which had been spending 2.05 cents per pupil annually for water, found it could save \$35 per month on its water bill.

City H has improved very much the buying, has standardized everything, and published standard lists of all supplies. "Our method of ordering has been improved, and our delivery service is 100 per cent better than formerly."

City I buys coal on the basis of so much per ton, with a guaranteed maximum total cost. This makes the dealer, as well as the district, personally interested in their total tonnage.

City M reports centralized buying and standardization of supplies as a means of effecting economies.

City I is contemplating the organization of a cooperative purchasing association, which will investigate the quality of various articles by tests, analysis, etc., and secure better prices by larger volumes of purchases.

City J. In the large list of things put out to bids, contracts are awarded on separate items to lowest bidder.

Capital Outlay

City K reports that before architects' plans and specifications are released for bids, they are carefully checked. Then estimates of costs are made so that costs can be kept within appropriated amounts. Because of these estimates, contractors have learned to keep bids as low as possible, with resultant low building costs.

City L. The intensive use of the plant has caused a saving of 15 to 20 per cent in operating costs.

City M is building large schools, thereby greatly reducing overhead cost.

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Announcing a new medium for curriculum enrichment

Presents
Initial showing of
EDUCATIONAL
TALKING PICTURES
for use in the classroom

RECORDED BY



EDUCATORS attending the Atlantic City Convention, February 22-27 are invited to witness the presentation of the first Talking Pictures produced expressly for the educational field. The demonstration

theatre in which these pictures may be seen is located near the entrance of the exhibit hall.



Electrical Research Products Inc.

DEPARTMENT OF EDUCATIONAL TALKING PICTURES
250 West 57th Street, New York, N. Y.

A California School Invulnerable to Rust



Balboa High School, San Francisco, California. Dodge A. Riedy, Architect. Guilfoy Cornice Works, Sheet Metal Contractor.

RAIN or shine, the Balboa High School in San Francisco is protected by Copper from the ravages of rust.

All exterior metal work, gutters, downspouts, flashings and doors are of Copper, which cannot rust. Frames of Copper make all skylights permanently water-tight.

Copper and its alloys, Brass and Bronze, stand for the best and most enduring in building construction. Copper flashings, gutters and downspouts, Brass or Copper pipe and solid Brass or Bronze hardware and lighting fixtures are rustproof. They give lasting service

without maintenance or replacement expense.

Leading architects recommend the use of Copper, Brass and Bronze in all buildings designed to be permanent. In school buildings these metals protect the health of pupils and effect worthwhile savings because, being rust-proof, they do not have to be replaced. Although they cost somewhat more in the beginning, their use is invariably an economy in the long run.

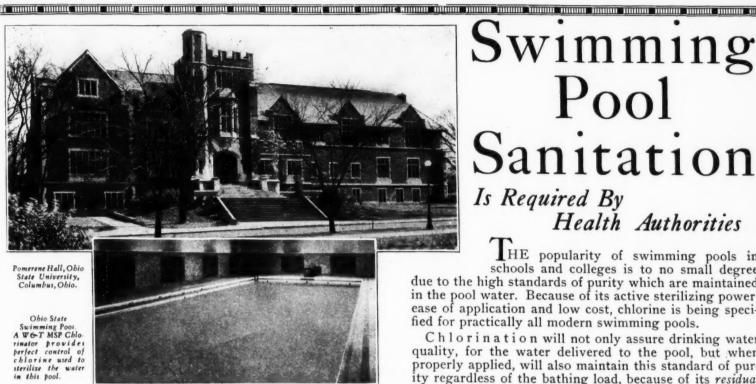
We will be glad to supply full and authoritative information about the use of Copper, Brass and Bronze in school buildings.

COPPER & BRASS

RESEARCH ASSOCIATION 25 Broadway, New York

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Swimming Pool Sanitation

Is Required By Health Authorities

HE popularity of swimming pools in schools and colleges is to no small degree due to the high standards of purity which are maintained in the pool water. Because of its active sterilizing power, ease of application and low cost, chlorine is being specified for practically all modern swimming pools.

Chlorination will not only assure drinking water quality, for the water delivered to the pool, but when properly applied, will also maintain this standard of purity regardless of the bathing load, because of its residual sterilizing power in pool water itself.

Write for our technolical publication on swimming pool sanitation



WALLACE & TIERNAN CO., Inc.

Manufacturers of Chlorine Control Apparatus

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WALLACE & TIERNAN, LTD., LONDON, ENGLAND

(Concluded from Page 74)

City E is spending the first million of a two-andone-quarter-million bond issue for new schools, kept within 1 per cent of the estimated costs

City E reports that 700 seats had to be rejected as they did not meet the specifications as to weight, quality, or curving. Slate blackboard was delivered on the job for No. 1 quality and, after a long argument extending over two months, the company met specifications. Window glass in the door was not plate as designated by the specifications. By such a method of checking, local as well as national supply firms soon came to learn that the school system of this city could not be exploited in such a manner.

City N reports that the school maintenance shop manufactures all school desks.

Fixed Charges

City J reports that the business manager has reexamined insurance-rate schedules of all school buildings and has overcome as many charges as possible. In 1928 received \$5,000 in return premiums on policies already in force. He adds that it pays to give considerable attention to insurance.

City C. In 1913 the board set aside \$25,000 annually as a permanent fund against fire losses. This \$25,000 represented the annual premium paid to insurance companies. In 1927 this fund and the annual interest on the investment amounted to \$400,000. The annual interest on this fund amounts to approximately \$20,000. Since 1925 no additional money has been set aside, as this city figures that the interest on the present accumulations will be adequate to take care of any probable losses by fire.

Maintenance

City H writes: "Under the present superintendent, shopwork has been reduced to those things which are profitable for the board to handle. We do not manufacture as much furniture as we did, but repairs and upkeep have been very much improved. It is my judgment that any city of considerable size can scarcely afford not to have a headquarters building for storage, shop, and repairwork. There is scarcely any way to profitably supervise and standardize without a central build-

City E. One superintendent, on taking over a new school system, found several thousand children on half-day sessions. After a survey of the school plants, 24 unused rooms were conditioned and pressed into service, thus giving full time to 2,000 children, while new buildings were being built. Half of these have become permanent rooms.

Not infrequently, before economies can be effected, the patrons and public alike have to be educated to a new point of view in administering the schools. Uneconomical practices long practiced, yet long since discarded by other systems, are hard to displace; and it requires patience, as well as courage, to face the criticism while the community is being integrated to the new plans.

In our endeavor to economize, let us remember that false economies should not be mistaken for real economies. To keep the most important things in mind the administrator should forever be a critical student of value, and in no case should children be denied their birthright. A more scientific approach, made possible through research in the more strictly business aspects, should make the expenditure of monies yield greater educational returns.

School Contracts—Lowest Responsible Bidder

In awarding contracts for school buildings the question of "the lowest responsible bidder" frequently comes into serious discussion. In the absence of a clear definition as to what the term really implies, certain complications frequently arise. Ordinarily the contractor who is "lowest' may secure the contract, and still not be "responsible.

It happens only too frequently that "the lowest responsible bidder," accompanied his bid with the prescribed deposit and a bond for the faithful performance of the contract, secures the business, and before the work is completed it is discovered that the contractor is morally and financially irresponsible. The bonding company completes the job, which means vexatious and costly delays.

A measure is about to be presented to the state legislature of New York which seeks to make more rigid the requirements for a contractor when bidding on public work. Mr. William H. Gompert, who served as the chief architect and superintendent of school buildings for New York City, discusses the subject as follows:

"Shortly after I assumed the office of architect and superintendent of school buildings, I discovered that there were practically no regulations to prevent anyone from submitting a bid for the construction of a new building. For the reason that so long as the bidder made the required security deposit with his bid, there was reluctance on the part of officials to reject the bid even though there was grave doubt of the bidder's ability to properly carry out the work or evidence of proper facilities for performing the contract.

"To correct or regulate this condition, I made a recommendation to the board of education and to the corporation council in 1923 to amend the state laws so as to clearly define the meaning of the lowest responsible bidder. Also to require of the bidders more definite qualifications than merely submitting the lowest hid accompanied by the required security deposit. At present the law simply states:

"'No contract for the purchase of supplies,

Both Floor and Treads-

Permanently Non-Slip

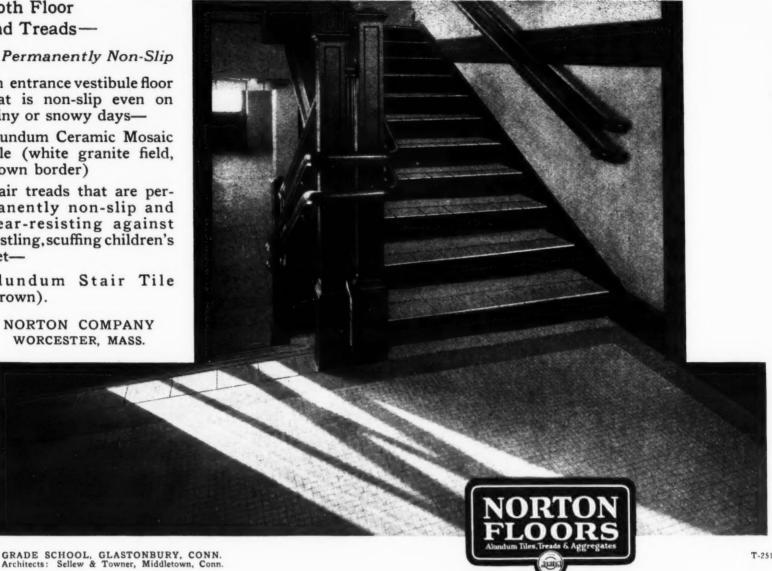
An entrance vestibule floor that is non-slip even on rainy or snowy days-

Alundum Ceramic Mosaic Tile (white granite field, brown border)

Stair treads that are permanently non-slip and wear-resisting against hustling, scuffing children's

Alundum Stair Tile (brown).

> NORTON COMPANY WORCESTER, MASS.



furniture, equipment, or for the construction or the alteration or remodeling of any building shall be entered into by a board of education involving an expenditure or liability of more than one thousand dollars unless said board shall have duly advertised for estimate for the same and the contract in each case shall be awarded to the lowest responsible bidder furnishing the security as required by such board."

"Each time that it became necessary to weigh and consider if the lowest bidder was also the lowest responsible bidder, no one cared to exercise the responsibility of ruling out the contractor whose ability and responsibility were questionable and whose experience was clearly too limited to undertake any important work. Therefore, I contended and recommended that the law should clearly define on what basis it can be determined who is actually the lowest responsible bidder. At the present time the qualifications appear to be complete when the contractor submits, with his bid, a certified check representing 5 per cent of the amount of the security and when the award is made to get a bonding company to furnish the necessary security bond which is not difficult to secure.

"This is an entirely inadequate provision, and a further qualification of responsibility should be length of time in business, size and magnitude of work previously performed. Besides this, a contractor should be able to present a good record both as to time of completion and character of work on previous contracts executed for private parties as well as for the city.

"In an instance where a contractor is bidding for the first time, the bids should have the endorsement of three responsible business men and three architects for whom the contractor has performed building construction work.

"The establishment of responsibility might be determined by a method of rating, similar to

systems employed in civil service rating, and allowing this rating to weigh in the consideration of the bids. For instance, a contractor should be penalized in the rating where the financial head of the concern does not appear on the work personally, for more than a week; or when he neglects to reply to correspondence and ignores notices to attend meetings of contractors to expedite the work; also when he fails to have materials or equipment on the job when needed. On the other hand, a contractor should receive a meritorious rating for having promptly completed the work and cooperated with the architect and city representative in the prosecution of the work, and this rating should weigh in his favor in the consideration of the bids.

"A contractor who is not established in the building industry or in any of its allied trades and who has not an established contractor's office with an organization or a shop or a material or equipment yard or other tangible or physical evidence indicating a definite identity with the building industry, should not be eligible to bid. If a bid is submitted and a contract awarded and it is subsequently found that a subterfuge has been practiced relative to the above requirements, then his contract automatically should become void."

SCHOOL LIBRARY STANDARDS Out of 272 accredited high schools in the State of Washington, 203 have some form of library. Miss Mary Kobetick, librarian of the Stadium High School, Tacoma, Washington, in discussing the subject of school libraries,

"Most of these libraries have been organized without guidance in the matter of proper equipment as to room and furnishings, organization of records such as shelf list and catalog, or a goal as to number of books and periodicals per student. Adequate appropriations are seldom

given by school boards and courses in training There is clearly a need for library standards which can be actually enforced.

"The standards under consideration by the Northwest Association of Secondary and Higher Schools recommend, where there are less than 200 students, that there be a separate classroom or end of study hall fitted up with shelving. tables, and chairs. If the enrollment is less than 100, a shelf list and adequate loan system is suggested. Above 100 enrollment, a catalog and accession record in addition is recommended.

"Where there are from 200 to 500 students in the high school, our standards specify a room equipped with shelving, tables, chairs, loan desk, catalog case, periodical rack, typewriter, bulletin boards, and space to accommodate 10 per cent of the enrollment allowing 25 square feet to a person. Where 500 to 1,000 students are enrolled, a workroom should be provided in addition, and where the enrollment is over 1,000, conference and library-instruction rooms are specified. In the matter of equipment the standards of the various association and state departments practically agree. There are a few minor exceptions. Certain, for instance, recommends a card catalog in an enrollment below 200 pupils. It is interesting to note that New York state recommends that the library never be a study hall unless the enrollment in the school is under 100. The seating capacity should be 15 per cent of the school's enrollment according to New York standards. Most standards specify that tables should be 5 by 3 ft., seating six pupils

"As to number of books and periodicals, our Northwest standards say five volumes for each student enrolled, at least one good daily newspaper, and a minimum of ten periodicals with an additional periodical for each 50 pupils up

(Concluded on Page 80)



Lockers

W. D. H.* 15x15x72" 15x18x72" 15x21x72"



W. D. H.* 15x12x60" or 72" 15x15x60" or 72" 15x18x60" or 72" 15x21x72"



(For Vocational Schools) W. D. H.* 15x15x60" or 72 15x18x60" or 72



Cord Lockers

(For Vocational Schools) W. D. H.* 15x15x60" or 72" 15x18x60" or 72"



Storage Lockers

(With Adjustable Shelves) W. D. H.* 18x18x60" or 72" 18x21x60" or 72" 18x24x60" or 72"



Gymnasium Lockers

Large Compartments W. D. H.* 12x12x60"





Single Tier Shoe Lockers

W. D. H.*
12x12x60" or 72"
12x15x60" or 72"
18x12x60" or 72"
18x12x60" or 72"
24x12x60" or 72"
24x15x60" or 72"



Single Tier Lockers

W. D. H.*
12x12x60" or 72"
12x15x60" or 72"
12x18x60" or 72"
15x15x60" or 72"
15x18x60" or 72"
18x21x60" or 72"
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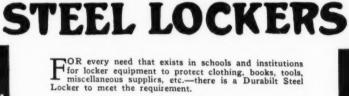
*Overall height including legs is 6" greater than height listed.



Multiple Tier (Box) Lockers

W. D. H. 12x12x12"—5 or 6 High 12x15x12"—5 or 6 High 15x15x14%"—5 High 15x15x15"—4 High

Note: Overall height including legs is 6" greater than comgreater than com-bined height of lock-ers in section.



DURABILT

These illustrations display a few of the numerous standardized types we are in a position to furnish. In addition to the applications shown here, the Durabilt line includes steel lockers of every description and steel cabinets in hundreds of sizes with interchangeable and adjustable equipment which provides unlimited flexibility in interior arrangement.

arrangement. We are also prepared to submit sketches on special drsigns (providing the quantity needed would justify it) and to assist in the preparation of your locker plans and specifications.

Our experience as "Locker Specialists" is always at your command to help with your locker problems. Avail yourself of this service which will not obligate you in any respect.

Phone our nearest Sales Office or write us direct at Aurora.

"No better built than Durabilt!"



Double Tier Shoe Lockers

W. D. H. 12x12x30" or 36" 12x15x30" or 36" 18x12x36" 18x15x36"

Note: Overall height including legs is 6" greater than com-bined height of lock-ers in section.



Double Tier Lockers

W. D. H. 12x12x30" or 36" 12x15x36" or 42"

Note: Overall height including legs is 6" greater than com-bined height of lock-



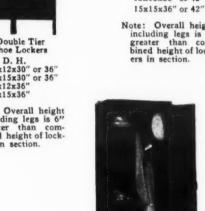
'Doorless" Lockers with Trays (For Art, Sewing, Cooking Classes, etc.)
W. D. H.*
12x15x60" or 72"

Equipment consists of 19 three-inch trays in 60" high and 23 three-inch trays in 72" high lockers.



Seven Person Combination Lockers W. D. H.* 36x18x72" 36x21x72"

compartment is 12" high and compartment is 60" high or a l of 72" exclusive of 6" legs.



Double Door Golf Locker

W. D. H.* 24x18x60" or 72' 24x21x60" or 72' 24x24x60" or 72'



Basket Racks

Basket racks may be placed end to end or back to back, to form any com-bination or arrangement desired. Capacity, 30 to 48 baskets per unit.



Bench Top with Pedestals We are prepared to furnish Bench Tops and Bench Pedestals when re-quired, as a necessary part of locker equipment.

All Basket Trucks are double row arrangement. Capacity, 60 to 84 baskets per unit. Caster equipment consists of two stationary and two swivel casters.



Basket Trucks

DURABILT STEEL LOCKER CO.

400 ARNOLD AVE..

Sales Offices in all Principal Cities

AURORA, TLL.

When the Absentee list Grows

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When classroom attendance dwindles during the colder winter months, it is well to give some thought to existing methods of ventila-

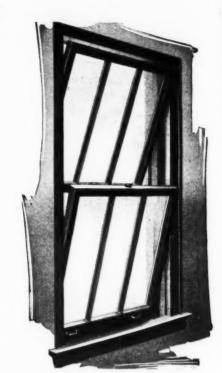
A recent survey by the United States Public. Health Service has shown that improper ventilating methods are responsible for much of the respiratory illness prevalent during the winter months.

Williams Reversible Windows are designed to provide ideal draftless ventilation. Both sash can be tilted at any desired angle, thereby deflecting the incoming air upward, and eliminating dangerous drafts.

Within the past 25 years, Williams Reversible Window Equipment has been installed in many of the foremost schools in the country.

For 25 years manufacturers and installers of Reversible Window Equipment.

The Williams Pivot Sash Company East 37th St. at Perkins Ave., Cleveland, Ohio



WILLIAMS REVERSIBLE WINDOW EQUIPMENT Clean Your Windows from the Inside

to 50. Now the Southern association provides that a basic collection of 500 books should be found where less than 100 pupils, and after that five books per pupil must be the goal. The certain report recommends five to ten books per pupil, five where over 1,000 enrollment, and ten where 200 pupils or less. On the other hand, New York state says 1/2 book per pupil, and the School Library Yearbook, six books per pupil. The Seattle public library and school board are attempting to provide three books per pupil in the intermediate schools and two books per pupil in the elementary schools.



Schools and School Districts

A clerk's failure to correctly make an entry showing the county commissioner's approval of a joint rural high-school district was complete, does not invalidate the order (Kans. revised laws of 1923, §72—3501).—State v. Rural High-School Dist. No. 2, Clark county, 280 Pacific reporter. 892, Kans.

School-District Government

Where a bank never became a "legal depository" of a school district because no written designation was made, nor bond executed by the bank, the treasurer remained liable for the funds deposited (Minn. general statutes of 1923, §2836).—School Dist. No. 20, Cass County v. General Casualty & Surety Co., 227 Northwestern reporter, 50, Minn.

School-District Property

The orders of an architect, made controller of the progressive payments of a contract to build a school building, must govern, in the absence of bad faith. - Maryland Casualty Co. v. Board of Education, 168 Northeastern reporter 392, 32 Ohio App. 520. School-District Taxation

A statute relating to procedure, when the right

to vote is challenged, is held inapplicable to a school-bond election, where no voter was challenged (Mich. public acts of 1927, No. 319). - Gardner Board of School Dist. No. 6, Leoni Township, Jackson County, 226 Northwestern reporter, 895, 248 Mich. 134.

An election notice, calling an election to be held in a schoolhouse in a district containing two school buildings, is held not indefinite as to place. ner v. Board of School Dist. No. 6, Leoni Township, Jackson County, 226 Northwestern reporter, 895, 248 Mich. 134.

A proposition submitting a school-bond issue to the voters for an addition to a schoolhouse is held to sufficiently designate a schoolhouse under the circumstances. — Gardner v. School Board of Dist. No. 6, Leoni Township, Jackson County, 226 Northwestern reporter, 895, 248 Mich. 134

School-district bonds are held not invalid because they provided for interest at a lesser rate than was authorized by an election. — Brown v. Truscott Independent School Dist. 20, Southwestern reporter (2d) 214, Tex Civ. App.

LAW AND LEGISLATION

-The state board of health of Wisconsin has decided that a health officer cannot deputize the school nurse to exclude children from school. The local health board alone has that authority. Nor can a nurse issue permits for children to return to school. Neither can the family physician grant such permits. The authority lies with local boards of health in the rural districts, and with the health commissions in the larger communities.

-The state department of public instruction of Wisconsin, has ruled that, unless it is specified in the contract, the teacher of a rural school cannot be compelled to perform janitorial service. Parents having children in the school are privileged to visit the school while in session, but under no condition should such parent or visitor in any way interrupt the schoolwork, or criticize the teacher in the presence of the pupils.

-The present compulsory school age in Massachusetts is 14 years. A report made by a special commission of the legislature, recommends that

the compulsory attendance age be raised to 15

"Such an advance," the report says, "would provide additional educational opportunities, enable boys and girls to acquire a higher social standard, and also give to the industries of the commonwealth a more intelligent and semiskilled worker, thereby enabling industry to produce a larger quantity and better quality of goods, at little or no increase in its pay rolls."

A SCHOOL POLICE FORCE

Concern for the safety of school children against the dangers of street traffic has prompted the board of education of Eau Claire, Wis., to create a school police patrol. The plan, as outlined by Supt. Paul G. W. Keller, provides the following:

'The work of supervision of Eau Claire police is in the hands of a lieutenant directly under the

chief of police of the City of Eau Claire.
"In each school a certain number of officers will be elected to take charge of the work in that school. The principal of the school will nominate twice as many candidates as there are officers. The students will elect the required number of officers from this

"These officers sign a pledge card and receive a star and belt to serve as proper insignia. They meet and elect a captain. It is the duty of the captain to work directly under the police lieutenant.

"Officers in the various schools have charge of traffic and will report any violation by autom on proper blanks, to the chief of police. Violations by students will be reported directly to the princi-

NORTHCENTRAL ASSOCIATION OF COLLEGES

The 1930 meeting of the Northcentral Association of Colleges and Secondary Schools will be held March 18-21, at the Hotel Stevens, Chicago, Ill. The members will take up problems connected with the national survey of secondary education, as well as the activities of the national advisory committee. Special reports will be presented on science teaching, experimental work, the status of athletics, minimum library standards, and the success of high-school graduates in college.

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The Most Correct School Door Construction and Design

School Buildings in all parts of America are equipped with Roddis Flush Doors — in the large and small cities, in townships, villages and country districts. Roddis Flush Doors are preferred universally for school buildings because they contain every prescribed essential to

school building codes and requirements — and include important advantages no other door provides.

Architects and school administrators everywhere have adopted Roddis Flush Doors as standardbecause of Roddis 5-ply, completely solid construction, because of Roddis truly fire-resisting, sound-retarding qualities and because of Roddis school building door designs. Moreover, Roddis Flush Door design and construction have given permanently satisfactory

service for more than a quarter century, alone a recommendation sufficient to substantiate high merit and superiority.

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School-Board News

WESTBROOK ADOPTS NEW PLAN OF BUSINESS PROCEDURE

The school board of Westbrook, Conn., has adopted a new plan of business procedure to develop more efficiency in handling the meetings of the board and to give opportunity for appropriate consideration of each problem presented to the members.

The board has prepared an outline of procedure, which allows a definite amount of time to be given

Monthly Financial School Report WESTBROOK, CONNECTICUT

	BUDGET ITEM	-	TO DATE	TO EXPENS
Teachers' Salaries	\$7200.00			
School Supplins	550.00			
Janizor Supplies	150.00			
Insurance	75.60			
Sundries	300.00			
Care of Schools and Graunds	100.00			
School Board Expense	250.00			
High School Transportation	1400.00	i		
High School Tuition	2550.00	1		
Local Transportation	4500.00			
Books	300.00			
Fuel	500.00			
Repairs	400.00			
Janitor	850.00			
Express, Freight and Carcage	60.00			
School Nurse	500.00			11
Junior Achievement	150.00			
Total	\$19835.60	9	1	

BLANK USED MONTHLY TO VISUALIZE SCHOOL EXPENDITURES AND BALANCE

to each problem, and additional time for the discussion of new business which may be presented. The plan has been found very helpful in reducing the amount of time given to meetings, and at the same time it enables the board members to give more intelligent consideration to the problems in a rather definite order. The accompanying illustration shows how the plan is carried out.

The school board has also adopted a monthly report form for the use of the secretary in reporting the expenditures for the month. The report is appended to the monthly payroll and serves the purpose of visualizing the expenses from month to month so that there is no necessity for exceeding the appropriation for any individual item.

Order to Procedure

1. Call to order		1	minute
2. Reading minutes		5	minutes
3. Communications from public		10	minutes
4. Unfinished business		15	minutes
5. Report of school officers		10-15	minutes
6. New business		1	hour
a) Criticism of school conditions	or	proced	ure.
b) Suggestions for betterment of	S	chool co	onditions
c) Consideration of requisitions.			

d) Authorizing payment of bills.

7. Adjournment.

NEW INSURANCE PLAN AT BELOIT, WIS.

The school board of Beloit, Wis., has undertaken a study of fire insurance, with the purpose of reducing the number of insurance policies from a total of 180 to one for each agency. The proposed plan calls for a general policy form covering the pro rata on buildings, with an average rate, and an appraisal of buildings to determine the present insurable value.

The insurance will be written either on a three-

year or five-year basis, and arranged so that an equal part of the total premium is payable each year. All insurance will expire on the same date each year. The insurance will be underwritten so that no company will carry more than \$10,000 on any one risk.

The new plan provides for a regular inspection of all school property by a competent fire-protection engineer, the inspection to be made at least once each year.

BOARDS OF EDUCATION

—Long Beach, Calif. The school board has given substantial salary increases to 161 janitors and watchmen in the schools. The raises amount to \$10 a month, \$5 of which was added the first of the year, and the remainder during the next six months. The salary increases were given as rewards for service of a superior type.

for service of a superior type.

Surveys completed, and others to be made, definitely fix the duties of all employees. All janitors and watchmen work according to certain standards and rules governing their work.

and rules governing their work.

—Findlay, Ohio. The board of education and the trustees of Washington township have begun suits in the Ohio common-pleas court against directors of the defunct Arcadia Savings Bank for the full amount of their deposits when the bank failed in 1927. The school board asks \$21,573, while the trustees want \$8,754.

—Radical changes in the bureau of architecture of the Chicago school board have recently been recommended by a committee of experts. Elimination of the greater part of the bureau, and the radical curtailment of the bureau of repairs are two suggestions of the committee. Others, no less radical, are the throwing open to leading architects of the work of preparing new school plans and the awarding of contracts for school buildings.

Under the plan, the positions of superintendents of construction would be abolished. All construction inspection work would be handled by leading inspection firms, while the school board's architect and a small staff of assistants would sit in with leading architects in advising the technical needs of

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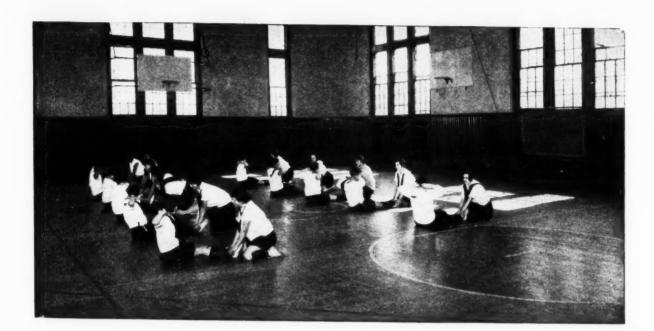
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BARE KNEES ARE SAFE ON BLOXONEND FLOORS

(NO SLIVERS POSSIBLE)



You are cordially invited to visit our Booth No. B-44 at the Department of Superintendence Exhibit, Atlantic City.

Illustrated above is a BLOXONEND Floor in the Isaac E. Young Junior High School, New Rochelle, N. Y. - Albert Leonard, Supt. of Schools. The building was designed by Starrett & Van Vleck, prominent school architects of New York City.

The Physical Director has stated that he would consider the exercise pictured as unsafe on any other wood floor due to the splinter hazard. BLOXONEND Flooring cannot splinter because the end grain fibres form the surface.

This Flooring is handsome in appearance, quiet, resilient, fast, and stays smooth. It is going into the gymnasiums and shops of finer type schools everywhere.

Our Booklet "School Floors" contains specifications for laying, gives details of construction and illustrates representative installations in gyms and shops.

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CARTER BLOXONEND FLOORING COMPANY

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BLOX-ON-END FLOORING Lay's Smooth

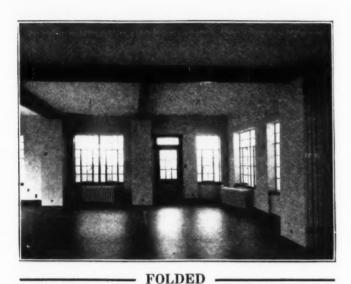
Bloxonend is made of Southern Pine with the tough end grain up. It comes in 8 ft. lengths with the blocks dovetailed endwise onto baseboards



Lay's Smooth Stay's Smooth



EXTENDED



(Continued from Page 82)

the schools. The plan would give the board of education a system of building construction similar to those in use by the State of Illinois and the Chicago Library Board. It would effect a savings of thousands of dollars.

—Minneapolis, Minn. The school board has appointed a special committee to make a study of the policy for handling outside requests for the purchase of the special devices made in the school-board shop. It was suggested that employees responsible for the invention of the devices obtain patents, the board receiving a royalty from them. It was the consensus of opinion that the board could not undertake the manufacture and sale of these devices.

—Minneapolis, Minn. The school board has been asked to approve a new plan of coöperative teacher training, which is to be carried on by the University of Minnesota and the Minneapolis school system.

—Chicago, Ill. Recent court decisions increasing the cost of nonteaching labor to the school board have been blamed by Trustee Heminway, chairman of the finance committee, for part of the \$7,000,000 deficit which the board anticipates next fall. The decisions were those affecting the employment of teacher clerks and the cleaning of schools. The transfer of teacher clerks, formerly recruited from the teaching forces, to civil service, is one reason why the board has been able to use but 70 per cent of its educational budget for teachers' salaries during the past year, as compared with 80 per cent four years ago. Another decision placing the school-cleaning forces under civil service classification greatly increased the cost of that service.

—Somerville, Mass. The school board has refused to approve a resolution calling for an increase of \$200 for each of the junior-high-school shopmen. While the members were not opposed to individual increases, they made it plain that they would not approve blanket increases which would increase materially the budget of the incoming mayor. The board members also refused permission to arrange for a personally conducted educational trip to Washington, D. C., during the spring vacation.

Handsome Folding Walls Sound Insulated and Mechanically Perfect

The uses for Circle A Folding Partitions are limitless. There are two styles, and four surface treatments. Wherever effective subdivision is desired, there is a Circle A Folding Partition to comletely suit the job.

Cabinet work is the finest obtainable. Operating devices are completely housed and fool-proof. The latest type sprocket roller chain drive insures smooth, positive action. Doors are hung on ball bearing swivel hangers.

The sound- and odor-proofness of Circle A Folding Partitions cannot be surpassed by any other movable partition. Celotex, Homasote or wood panel and Cabots Quilt, provide effective insulation. In addition, all small openings have been completely insulated with felt strips.

The laminated construction of Circle A doors and the use of thoroughly seasoned hardwoods are proof against warping.

Installed by Circle A engineers and guaranteed for one year against faulty operation. Send today for illustrated data.

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—Toledo, Ohio. The school board has opened a central station where clothing for the relief of indigent school children will be received. The board has appointed a special committee to carry out the relief program. Under the plan, parents are solicited to donate clothing, and volunteers will be enlisted to undertake the repair of clothing at the head-

—Mr. Julius Fleischmann, Jr., of Cincinnati, Ohio, has presented a set of "The Chronicles of America Photoplays" to the board of education for the use of the local schools. The films will be made available for certain schools in the county, and in the Country Day School, of which Mr.

Fleischmann is a trustee.

—The board of education of Washington, D. C., is appointed by the district judges. The Capper-Zihlman bill introduced in Congress, provides for a board elected by the Washington people. It is held that, since the judges come from elsewhere, they are not as deeply concerned in the selection of board members as would be the parents having children at school. It is also claimed that school buildings, in point of safety and convenience, are below those found in the average American community.

—Cleveland, Ohio. School teachers may live any place they choose, as far as the school board is concerned at present. A resolution proposed by Mrs.

USE OF SCHOOL PLANT

Wider use of the school plant can be much more extensive than we now find it. While the United States among civilized nations has a high average number of years of school per pupil, the amount of time per year per pupil is relatively short. Public schools now operate on the equivalent of every other day of the calendar year and the school plant is consistently idle important hours during every day. The future may require, in view of the pressure on the financial side, consideration of the use of the plant late afternoons, evenings, Saturdays, and vacation time. — David H. Pierce, New York University.

Clara T. Bewer, providing that teachers be required to live in the city, was reported unfavorably at a meeting of the board.

—Tiffin, Ohio. The school board has adopted a policy not to release a teacher from the terms of her teaching contract, except for serious illness or death. A certain teacher on the staff had asked that she be released from her contract to accept a better position.

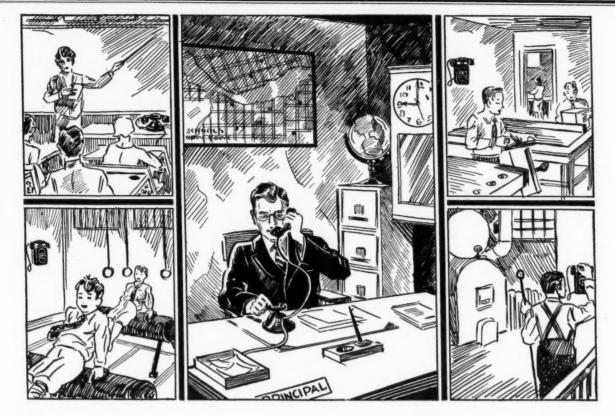
—Detroit, Mich. A taxpayer's suit has been begun in the circuit court, with the board of education as defendant, and William Theuer as complainant. Mr. Theuer charges the board with purchasing condemned land at an exorbitant price, and with improper use of its power. The land was purchased as a site for a proposed school, at a cost of \$52,-248, when another site five blocks nearer the residence section could have been bought for \$32,000. The action was taken over the veto of the mayor and against the advice of the corporation counsel.

—Cleveland, Ohio. The board of education has been asked to approve a plan of the local chamber of commerce for placing plaques bearing portraits and biographies of men after whom the schools have been named, in the schools themselves. There are about fifty schools in the city named after famous men.

—Chicago, Ill. A total of 12,793 school teachers and other school employees received checks for their Christmas salaries just a few days before Christmas. The distribution of the checks was made by the principals in the various schools and was effected through a loan of \$3,100,000 obtained from a local banking firm.

—The trend of present legislation, according to the U. S. Office of Education, is toward fixing greater responsibility in the state boards for the administration of the state school systems. Within the two-year period comprehended in a review of laws, several changes in the composition and duties of the state departments were made by legislative enactment. California increased the membership of the state board of education from seven to ten, and provided for the establishment of a division of schoolhouse planning in the state education department. A constitutional amendment in Virginia made

(Concluded on Page 87)



For Adequate School Supervision Strowger P-A-X Is Essential

In the supervision of school activities, an automatic system of communication between the many class rooms and departments is an absolute necessity.

Principals and head-masters, in schools where Strowger P-A-X is installed, find this automatic interior telephone system an essential tool of efficiency. For checking up absentees, for obtaining immediate connections with custodians, for summoning pupils, for instructing teachers, as well as a variety of routine uses—Strowger P-A-X has practical uses without end.

Technically, Strowger P-A-X is everything that could be desired in an interior communication system. It is made by the originators of the automatic

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Tele-Chec Systems (for theatres Watchmen's Supervisory Systems

Railway Communication Equipment Marine Telephone & Signalling Systems

Miscellaneous Telephone and Signal Accessories.

telephone and is the only private automatic telephone system that is built of apparatus adopted as standard by public telephone companies. The equipment is rugged and durable, easy to maintain and practically trouble free.

Strowger engineering service is backed by more than forty years of experience in the production of automatic telephone equipment for service the world over. Strowger engineers will welcome the opportunity of making a survey of any school project calling for interior telephone equipment and recommending accordingly.

Bulletin 1226 gives further details. A copy is yours for the asking.

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In answer to the modern vogue for color the popular Monophone may now be had, not only in black, but



also in a variety of beautiful colors. Made of solid colored synthetic resins with chromium or gold plated fittings.



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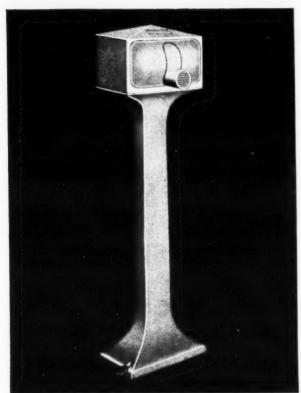
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The Electric Towel Safeguards the Health of Every School Child



The Pedestal Type Electric Towel can be installed in all school lavatories.



The Built-In Wall Model should be included in all plans for new school buildings.

Sanitary drying equipment in school lavatories is the mark of the modern school. Towels of any kind—linen, paper or roller—require handling and thus are possible sources of disease spreading.

The Electric Towel is positively safer and cleaner. It provides warm, drying air that completely removes all moisture and leaves the skin in smooth, satiny condition. There are no chapped hands and faces when Electric Towel does the drying.

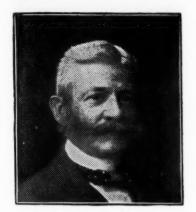
And most amazing — the Electric Towel costs less to operate than any other drying equipment. Every school board member, every principal and school executive owes it to the health of the community and the children in its schools to provide this modern drying equipment. Complete information will be furnished on request.



The Hair-Dryer Type installed in the gymnasium and swimming pools guards against the necessity of pupils attending classes with wet hair after taking a shower bathor plunge.

The Electric Towel

Made by GENERAL UTILITIES MFG. CO., 4058 Beaufait Street, Detroit, Michigan Pioneers of the Industry



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THE HOLDEN PATENT BOOK COVER CO.

Miles C. Holden, President

Springfield, Massachusetts

(Concluded from Page 84)

a complete change in the composition of the state constitution provided that the state superintendent should be appointed by the governor until January 1, 1932. The legislature of Nebraska adopted a provision which requires that, in order to be eligible to hold the office of state superintendent, one must be a graduate of the state university, or an institution of equal standing, and must have completed at least twenty credit hours in educational subjects.

—Davenport, Iowa. The board of education has begun a study of the methods used in Iowa cities for controlling secret societies in the high schools. A movement has been begun to eliminate these societies in the local school system.

—Homewood, Ill. In keeping with modern tendencies, the school board has employed a special teacher, or helping teacher, to assist pupils who are backward. The teachers have been asked to select those students who will best profit from the

—Haverhill, Mass. Mr. Theodore N. Waddell, state director of accounts, has given a ruling to the mayor, in which he holds that the school board must turn in all revenue received from athletics, and may not spend any part of the money. He points out that the school board may rent the stadium or field for any sum they may deem proper, but they are accountable only for the money received. In the opinion of Mr. Waddell, the school board cannot be both a school committee and an association, and no member of the committee can serve as a director in the athletic association which conducts the school games, unless the receipts from such games are treated as public funds, the expenditure of which is subject to the laws relating to municipal finance.

—New York, N. Y. The school board recently awarded contracts for food, transportation of pupils, and transportation of supplies, totaling more than \$300,000. The cost of foodstuffs for the school kitchens totaled \$45,000, and \$20,000 was set aside for the purchase of perishable food from day to day without the letting of contracts. Transportation cost \$200,000, and \$68,000 was appropriated for the purchase of trucks for the delivery of school supplies.

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—Findlay, Ohio. The school board has fixed the rental price of the high-school auditorium at \$20. The charge covers the expense of heat, light, and janitor service in the building.

—Milwaukee, Wis. The all-year school plan will be studied for possible adoption in the schools. A resolution presented by President Stephen A. Park, provides for a survey and a report on the plan by Supt. M. C. Potter. The proposed plan has met with strong opposition. It has been attacked by Miss Ethel Gardner, president of the Milwaukee Teachers' Union, and is opposed by the federated trades council of the city. The opponents of the plan claim that it will disorganize the schools and will clash with the present child-labor laws.

—Davenport, Iowa. An investigation of secret societies in the high school has been begun by a committee of three, appointed by the school board. The action is the result of a petition calling for the removal of six fraternities and three sororities. The charges preferred against the organizations are snobbishness, smoking, drinking, and undue influence in athletics and class parties.

—Chicago, Ill. Charging the members of the board of education with usurping and interfering with the powers and duties of school executive officers, in violation of the law, Attorney Angus Roy Shannon has asked the supreme court at Springfield to restrain the school trustees from further violating the rights of statutory officials.

In supporting his motion, Mr. Shannon criticized Mayor Thompson and his trustees, as well as members of the present city administration.

—The vocational and technical high school at Grand Rapids, Mich., has been named the George A. Davis School in honor of a citizen who had served 25 years as a member of the local board of education.

—Youngstown, Ohio. The size of the local board of education will be automatically reduced from nine to seven members with the completion of the 1930 census. The change is the result of a new law, which provides for a board of seven members in cities of 150,000 or more population. Only three vacancies will be filled, W. C. Gubbins, Warren P. Williamson, William Rowney, and Lamar Jaconson continuing in office.

—Pupils in consolidated schools show an average of 21.2 per cent greater achievement than those in 1-room schools of Ohio, according to the findings in a recent survey made by Mr. George M. Morris, rural-school supervisor for the state.

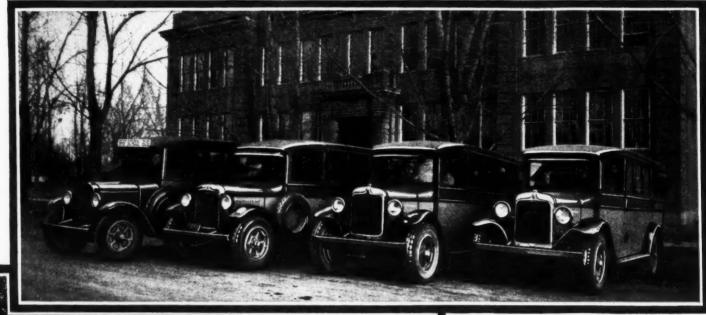
The survey included 35 counties, with an approximate enrollment of 133,000 pupils. Each of these showed the average grade of the consolidated school to be above the average in the 1-room school for the same examination. The highest percentage of difference was seen in Columbiana county. Pupils in the consolidated schools were graded at 68.5 per cent, and in the 1-room schools 37 per cent.

—A study of the salaries of county superintendents of schools in Indiana has been made by Mr. R. R. Roudebush, assistant superintendent, under the direction of State Supt. R. P. Wisehart. The report shows that the average salary as fixed by the township trustees of the various counties is \$2,616. The median salary is \$2,408, while the mode is \$2,400. The highest salary paid any county superintendent is \$5,500, and the lowest is \$1,800. Sixteen superintendents receive \$2,400 each; eleven receive \$2,408 each; ten receive \$2,500 each; nine receive \$3,000 each, and six \$2,000 each. Seven superintendents receive \$4,000 or more each.

—Cleveland, Ohio. Under the direction of Supt. R. G. Jones, mass education will be given its first real test in the schools in 1930. Briefly; the plan calls for giving the services of the highly trained specialized teacher to all pupils in a given grade, rather than to a few. In the experiments to be conducted during the year, the teacher will reach large numbers of pupils through the radio and auditorium assemblies.

Under the plan, it is proposed to make use of a city-wide telephone hook-up system. Using the telephone, the teacher will outline her lessons through a room telephone at the school headquarters. Each teacher will be given a copy of the lesson to be broadcast, so that she may prepare her pupils for the lesson. All pupils in the schools will be divided into two groups, one to have the benefit of the specialist's teaching, and the other to follow the program used at present. At the end of the course, both groups will be given examinations to determine the success of the innovation.

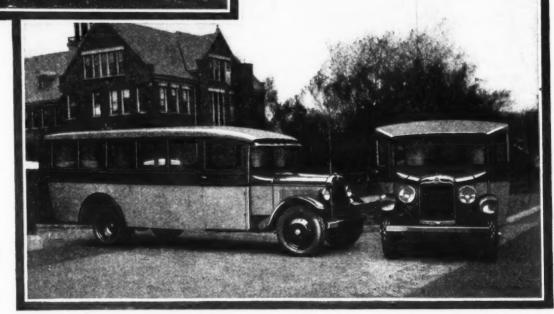
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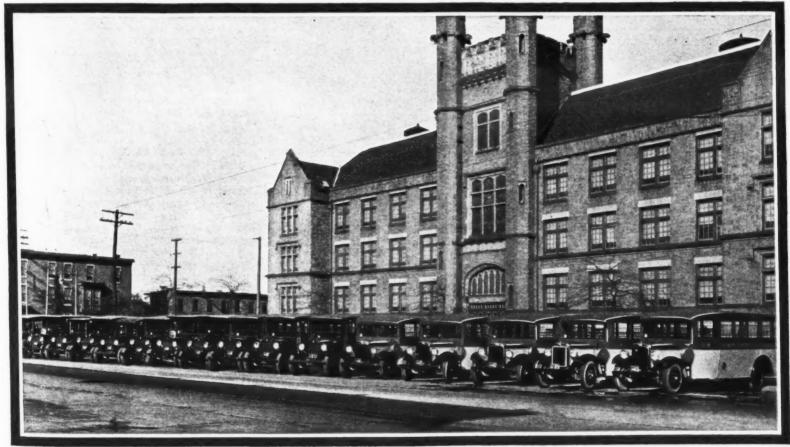
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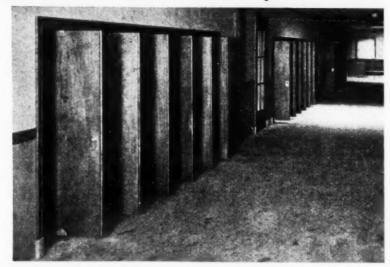


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THE ARGUMENT FOR HOMEWORK

A study of the problem of homework in the elementary schools of New York City has been made recently under the direction of Mr. Joseph H. Wade, district superintendent of schools of that city

The report, which was based on the replies to a questionnaire sent to superintendents, examiners, teachers, and principals, covered the part which the teacher plays in making homework worth while, through explanation of the assignment and the wise supervision and management of the study period in school and library.

A statement including suggestions and recommendations, and a summary of a similar report by the New York Academy of Public Education was submitted in part as follows:

"There is a real demand for homework performed under proper supervision.

"Compulsory homework should be prohibited for children below the fourth school year.

"For pupils in seventh-year classes, the maximum time for home lessons should be one hour. In eighthyear classes it should be one hour and a half.

"Home study, properly explained and carefully supervised, will develop self-reliance, neatness, concentration, accuracy, industry, responsibility, thoroughness, and the habit of study.

"Proper home study is a factor in the improvement not only of the school, but of the home

"Principals and teachers must use every means to make homework both honest and effective.

"Systematic plans must be made for the supervision of all homework so that it may not become

an undue strain upon the energy of the class teacher, nor take time which should be devoted to class

"In assigning homework, actual study should demand one half the additional time which is given to written work.

"Principals have no more important duty than carefully to supervise both the assignments of home study, and the methods of determining the honesty and efficiency of results.

"No homework should be permitted, unless adequate explanation has been given in school by the teacher.

"In departmental work there is great danger of assignment of excessive homework. In graduation classes, however, pupils must become thoroughly accustomed to homework or they will be badly handicapped when they enter high school.

"It is advisable in most schools to ask parents at least once a week to sign the written homework.

"The same amount of homework should not be expected from all classes in the same grade. The "two" or slower classes should be given a smaller portion than "one" classes of the same grade.

"The chief aim of homework should be to supplement classroom instruction. It should be educational, and it should not be regarded as a preventive measure to keep children off the street.

"To a great degree, homework varies according to neighborhood conditions.

"Quality, not quantity, should be the standard of efficiency in judging the results of homework.

"Principals should control the specialists in departmental work, and prevent the demand for the preparation of too elaborate notebooks, drawings, maps, or essays.

"In every school some uniform plan should be adopted to regulate the general plan of home study, and throughout all grades, teachers should be directed in the use of the study period where such period is utilized.

"Every intelligent teacher should ask herself, 'How can I excite in my pupils an interest in their studies?' She must look for the motives that will induce interest — first in the classwork, and then in the homework. If a class as a whole neglects its

home study, we may be sure that the teacher is largely to blame. She has not trained her pupils how to study. She has not excited any interest in the work, or she has assigned homework without necessary explanation, and we may expect the natural result of lack of interest."

ELIGIBILITY QUESTION RAISED IN SELEC-TION OF JUNIOR-HIGH-SCHOOL

PRINCIPALS

In adopting a ruling of the New York state education department that junior high schools are secondary schools, and in proceeding to select four junior-high-school principals in the same manner followed in filling senior-high-school positions, the New York City board of superintendents has run into difficulties. As a result of the tangle, the bylaws of the board will have to be amended to avoid future difficulties.

The question of eligibility for the junior-high-school principalship was raised following the announcement of the names of 29 applicants called for formal interviews as a preliminary to nomination. All but one of the applicants are elementary-school principals. The exception is Mr. William Dean Pulvermacher, first assistant in biology in the Jamaica High School, and the first person to be considered for a junior high school without having first served as the head of an elementary school. There is a question whether Mr. Pulvermacher is eligible for the post he seeks. Should this teacher be selected for one of the vacancies, it will be necessary to amend the school by-laws so that his qualifications may not be in doubt.

SAFETY FOR SCHOOL CHILDREN

The safety work of the Los Angeles, Calif., schools is in charge of Luke L. Gallup, assistant superintendent. He has not only inaugurated several safety committees, but has also coördinated all the agencies, such as the police, city council, etc., in protecting the school children against the dangers of street traffic. The work has resulted in a safety service which covers 156 school crossings regularly and 62 school crossings irregularly. It has also resulted in the designation of 954 pedestrian safety lanes.



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BUILDING NEWS

THE RATING OF LOW-PRESSURE HEATING BOILERS

A complete code for the rating of low-pressure heating boilers has been adopted recently by the Steel Heating Boiler Institute, an organization made up of technical and engineering departments of practically all manufacturers of steel heating boilers in the United States. The purpose of the code is to provide a uniform method for rating low-pressure heating boilers, and for generally improving the engineering and trade practice in relation to the specifying and installation of steel boilers. The code is as follows

Code for the Rating of Low-Pressure
Heating Boilers

1. The purpose of the code is to provide a uniform method of rating low-pressure heating boilers. 2. The rating of a boiler shall be expressed as square

feet of steam or water radiation, or as B.t.u., per hour.
3. For purposes of the code, boilers are divided into two general classes as follows:

a) Steam and water boilers in which solid fuel, hand fired, is used as the heat-generating medium.
b) Steam and water boilers in which solid fuel,

mechanically fired, oil or gas is used as the heat-generating medium.

4. The rating of a boiler in class a, expressed in square feet of steam radiation, shall not be more than fourteen times the heating surface of the boiler in square feet.

5. The grate area of a boiler for the heating, as determined by section 4, shall be not less than that

determined by the following formulas: For boilers with ratings of 300 sq. ft. to 4,000 sq. ft. of steam radiation

Catalog rating (in sq. ft. steam Grate area = radiation) — 200 25.5

For boilers with ratings of 4,000 sq. ft. of steam radiation and larger:

VCatalog rating (in sq. ft. steam radiation) — 1500 Grate area =

6. The rating of a boiler in class b, expressed in square feet of steam radiation, shall not be more than seventeen times the heating surface of the boiler in

7. The furnace volumes of a boiler (as defined in section 10) for the rating (as determined by section 6) shall be not less than 1 cu. ft. for every 140 sq. ft. of steam rating.

8. Boilers selected on the basis of the code shall be connected to the stack and breeching in accordance with the manufacturers' specifications.

9. The rating as defined for purposes of selection is intended to correspond to the estimated design load, which is to be the sums of items a, b, and c.

a) The estimated normal heat emission of the con-

nected radiation required to heat the building as determined by accepted practice, expressed in square feet of radiation, or in B.t.u., per hour. The estimated maximum heat required by water

heaters, or other apparatus connected to the boiler, expressed in square feet of radiation, or in B.t.u., per hour. c) The estimated heat emission of piping connecting

the radiation, or other apparatus connected to the boiler, expressed in square feet of radiation, or in B.t.u., per hour.

10. Definitions:

For purposes of the code, the following definitions will be used:

a) One square foot of steam radiation shall be considered equal to the emission of 240 B.t.u., per hour, and one square foot of water radiation shall be considered equal to the emission of 150 B.t.u., per hour.

b) The heating surface shall be expressed in square

feet and include those surfaces in the boiler which are exposed to products of combustion on one side, and water on the other. The outer surface of tubes shall

c) The grate area shall be considered as the area of the grate surface expressed in square feet, and measured in the plane of the top surface of the grate. For double grate boilers, the grate area shall be considered the upper grate plus one fourth area of the lower grate.

d) The furnace volume shall be considered as the cubical content of the furnace between the top of the base, or the normal grate line, and the plane of entry into, or between the tubes, plus the net base volume under the firebox. The net base volume shall be determined by deducting the volume of the refractory lining from the gross base volume under the firebox.

THE FUNCTION OF THE SCHOOL-BUILDING SUPERINTENDENT

When the board of education of New Castle, Pa., realized that the school system had assumed a scope sufficient to warrant additional supervision, it created the position of superintendent of buildings, grounds, and equipment. The appointment is made from year to year and commands a salary of \$2,500. The duties outlined are as follows:

1. To be the responsible agent of the board in the construction, alteration, and repair of buildings in accordance with the plans and specifications approved by the board, and in cases where any work is done by contract and under the direction of an architect employed by the board to act as the agent of the board in the inspection of such work.

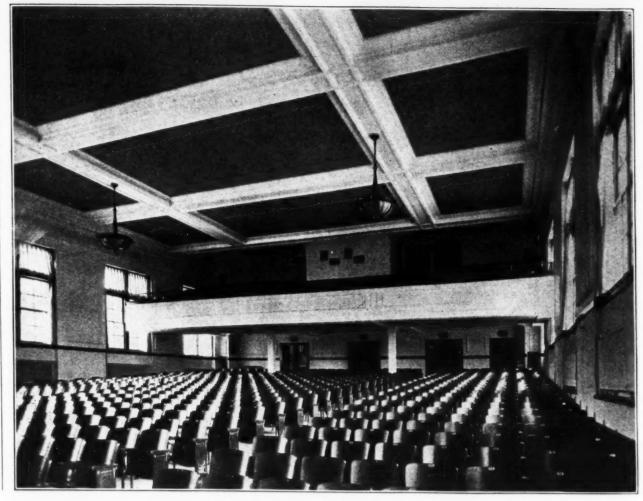
2. Recommend to the board through the superintendent, such janitors and other employees as shall be needed for continuous employ, and have authority to employ for brief periods such workmen as are immediately necessary.

3. Shall be responsible to the board through the superintendent of schools for the maintenance and operation of the heating and ventilating plants and all mechanical equipment in the various schools, and for the cleaning and heating of the various buildings.

4. Shall make investigation and study of the various types of school furniture and equipment and make recommendation, through the superintendent, to the board of the result of his investigation and study which shall be for the ultimate purpose of standarizing the furniture and equipment of the schools of the school district.

5. Shall prepare and keep on file an inventory of all furniture, tools, repair supplies and other materials under his jurisdiction which inventory shall at all times be open to the inspection of the superintendent of schools and the board of directors, and a copy of which shall be filed with the secretary of the board in the month of July, 1927, and annually on the first day of July thereafter, and to make such other reports and in such form as the superintendent of schools may direct.

6. Shall keep a record of the fuel, light; power, (Continued on Page 94)



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Every word CLEARLY AUDIBLE in every part of the room

WHAT a difference in school assembly halls when noise is subdued, and disconcerting echoes stilled!

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(Continued from Page 92) water, and other materials used in the several school buildings showing the amount of each commodity used, and in such form as the superintendent shall require, to show waste or efficiency of the several plants and efficiency of employees, and to make a monthly report through the superintendent of schools of the same.

THE EL PASO SCHOOL-BUILDING **PROGRAM**

The city council of El Paso, Texas, on November 21 last, approved the issuance of \$570,000 in school bonds to provide for the immediate construction of school buildings in El Paso. Of the total bond issue, about \$360,000 has been definitely reserved for the construction of a high school in the eastern part of the city. A site consisting of four blocks has been purchased and the building is to be completed in September, 1930.

The new high school is intended to accommodate 1,000 students, and will serve the northern portion of the city east of Cotton Avenue. The plans of the building contemplate an addition to be constructed later, which will make the entire structure a fine type of high-school building accommodating about 2,000 students.

There will be \$210,000 left of the bond issue which is insufficient for the needs which it will be called to fill. Among the proposed projects are additions to a number of existing schools, and a new warehouse and repair shop for the school system.

BUILDING NEWS

-Cincinnati, Ohio. The board of education recently sold to a local bonding house \$2,300,000 worth of school bonds, on a 4½-per-cent basis, with a premium of \$30,314. The proceeds of the bonds will be used to finance the construction of the new Walnut Hills High School and the Oyler School, and to retire the short-term-notes work on the Twenty-Third District School.

—Boston, Mass., has a newly organized school-house commission. It consists of Dr. Francis D. Donoghue, appointed by the mayor, Richard J. Lane, chosen by the school committee, and Stephen W. Sleeper, chosen by Donoghue and Lane. The

Boston Herald says: "Thus we now have a board of three members, able and representative, with no axes to grind, who have the best interests of the schools at heart. The spirit of the new law is well represented in the personnel of the new board, and we expect that the abilities of the members will

quickly be shown by the quality of their work."

—Paragould, Ark. The school board has undertaken the remodeling and enlargement of the highschool building, to provide facilities for the new junior college to be opened next September. The financing of the new project is being handled by the local citizens

-Pawtucket, R. I. The school board has taken steps to carry out the proposed building program inaugurated two years ago. The program will provide for two new structures in sections where the need for additional school facilities is imperative.

-San José, Calif. The school board has taken steps to carry out a school-construction program involving an expenditure of approximately \$1,-000,000. The program calls for the erection of four junior high schools and three elementary schools.

-Superior, Wis. The school board has adopted a resolution calling for a school-building program, to cover a period of ten years and for the reconstruction of such schools as may be necessary for adequate housing facilities. A committee of three has been appointed to conduct a survey of the needs of the school system in the way of new buildings or additions.

-New York, N. Y. More schools are under construction in New York City today than at any time since 1924, according to Dr. George J. Ryan, president of the board of education. The amount of the present construction work totals approximately \$42,000,000, and the program embraces 47 buildings, providing 88,000 additional seats. Six new buildings called for in the program will be begun in the near future, so that the cost of the construction program will eventually reach \$50,000,000.

-Representative Robert Simmons of Nebraska, in a speech delivered recently before the Congress, said that the five-year school-building program of the District of Columbia has failed because of its

own inherent weaknesses and defects. In Mr. Simmons' opinion, it failed because it attempted to prophesy in 1925 what the growth and needs of the city would be in 1930-31. He pointed out that neither the Commmissioners, the Bureau of the Budget, nor Congress should be criticized for refusing to appropriate money for that part of the program which the school officials themselves cast aside. It was found necessary at times to change and ignore the program in making appropriations, in order that the pressing needs of the schools might be met.

It is expected that 160 of the 186 part-time classes and 53 of the 72 portables will be relieved by construction now under way or appropriated for in the 1931 budget proposals, so that of the 2,784 pupils now in portables, there will remain only 591, and of the 6,972 pupils now in part-time

classes there will then be only 960.

—Philadelphia, Pa. The school board has been compelled to discontinue all 1930 school-building work because of a lack of money. Despite the fact that overcrowded conditions in the schools make the addition of twelve new buildings imperative, not a single one of the needed buildings will be erected. According to Mr. Edward Merchant, secetary of the board, inability to collect taxes due this year has placed the school board in a financial hole, amounting to three quarters of a million dollars. The deficit is felt first in the current running expenses, although it will be reflected to the largest

extent in the building program.

—Louisville, Ky. The major item in the proposed school-building program is the Crescent Hill High School, to be erected at a cost of \$600,000.

-Detroit, Mich. The board of education plans to spend more than \$38,000,000 during the coming year for current school expenses. The proposed new buildings account for most of the increase in school expenditures, their estimates being \$9,638,000, as against \$5,250,000 allowed last year.

-Berkeley, Calif. Dr. A. B. Howe, president of the board of education, in outlining some of the city's most pressing school needs, recently urged a bond issue of \$2,500,000 as the real solu-

(Concluded on Page 96)



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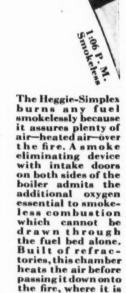
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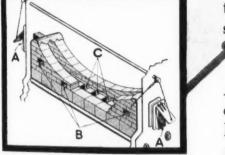
At 1:00 P.M. the fire was cleaned and twenty scoop shovels of low grade soft coal were added, being thrown on in a manner that would create the maximum of smoke. Immediately the smokeless device of the Heggie-Simplex began 5 function.

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* "No. 3" smoke is that grade of smoke ordinarily termed offensive in city



the fire, where it is thoroughly mixed with the gases.



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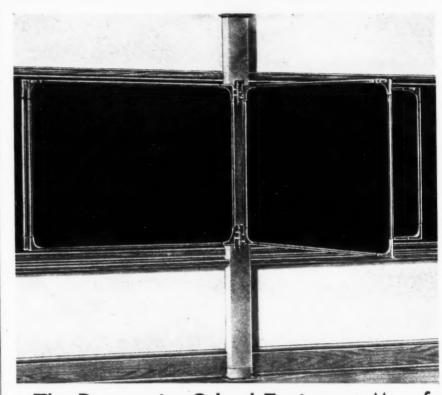
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The Progressive School Equipment Manufacturing Company Kansas City, Missouri Manufacturers Exchange

(Concluded from Page 94)

tion for the city's schoolhousing shortage. Dr. Howe pointed out that approximately \$175,000 is the maximum amount per year to be expected from current revenue. At the rate of \$175,000 per year, it would take about twelve years to provide for the needs in school building which exist at the present time. In the meantime, the rest of the plant is becoming obsolete.

-Irvington, N. J. The school board has taken steps to relieve the schoolhousing situation by putting into execution the recommendations made in the state survey of schools. The report called for a 25-classroom building at Berkeley Terrace, 16 classrooms at Augusta School, and new additions of 11 and 12 classrooms within five years. During the second five-year period, the report calls for another 12-room addition at Augusta, 24 rooms at Hillside Terrace, and 12 more classrooms at Fortieth Street. The new program is expected to provide for the future growth of the school system, and to eliminate all part-time classes.

-The Menekaunee Elementary School at Marinette, Wis., was dedicated on December 10, with a dedicatory program. The building accommodates the kindergarten and first six grades and has a capacity of 340 pupils. It was erected at a total cost of \$82,814, or 29.7 cents per cubic foot, and \$221.45 per pupil. The cost of the furniture and

equipment was \$2,964.

—Reading, Pa. The voters will shortly be asked to approve a proposed bond issue of \$2,000,000 for school-building purposes. The new program for the year will include the erection of a junior high

-Milwaukee, Wis. An ordinance authorizing the issuance of \$680,000 in 41/2-per-cent school bonds has been presented to the city council for approval.

approved a bond issue of \$465,000 for a junior and senior high-school building. The building, which will be erected on a ten-acre site, will be three stories in height, of the U type of construction.

-Charleston, W. Va. Bonds in the amount of \$450,000 have been voted by the Loudon school district. The bonds will provide for a senior high

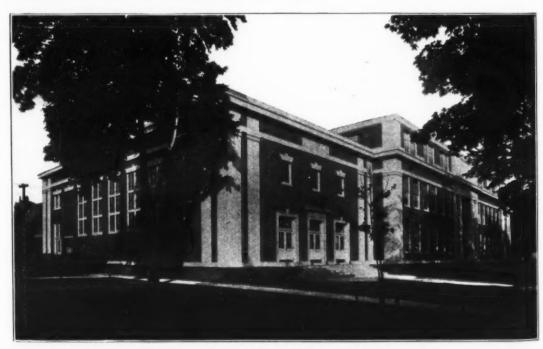
school, to cost \$250,000; a junior high school, to cost \$100,000; a grade school, to cost \$50,000, and two additional grade schools, to cost \$20,000 each.

-Indianapolis, Ind. The state tax board has approved a proposed bond issue of \$1,215,000 for the construction of a high school, two grade schools, and additions to two other buildings.

The second project in the Winona, Minn. building program of the school board will be the erection of a two-story elementary school, to cost approximately \$125,000. The building, which will be started early next spring, will take care of pupils of the old Central School and a part of the pupils in the Jackson School. Plans for the building have been prepared by Boyum, Schubert & Sorenson, architects, of Winona.

The next step in the program will be the erection of a new school to replace the present Madison School.

-Fox Lake, Ill. The voters recently approved a bond issue in the amount of \$72,000 for a school



THE NEW LOCK HAVEN HIGH SCHOOL, LOCK HAVEN, PA.

The Lock Haven Senior High School at Lock Haven, Pa., which was completed and occupied in September, 1929, accomodates a total of 600 students. The building is constructed of steel and concrete, with exterior facing of tapestry brick. The corridors and stairs are of composition, the classroom floors are of maple, the gymnasium is finished in buff brick, and the toilet rooms in green and white.

In addition to the 33 classrooms, the building contains a commercial department, an auditorium, a gymnasium, library and study rooms, laboratories, offices, restrooms, and book storage rooms.

The building is heated by a unit-vent heating system, with automatic temperature control. The building was erected at a cost of \$300,000.

Each block is a complete square or rectangular unit of three or more flooring strips, in oak, walnut, maple, beech, light and walnut, maple, beech, light and dark Philippine mahogany, yellow pine, either beveled or square edge, 634" to 12" squares, 13/16" thickness, all grades. Rectangle sizes 6"x12", 634"x13½". "CELLized by a chemical treat, to reduce the tendency to change in size Insect and decayresistant. in size. Insect and decay resistant.



*CELLized Wood Floor Blocks

were selected for the North Little Rock High School!

SCHOOL construction experts agree that perhaps in no other type of structure is a floor expected to meet so many exacting requirements as in a modern school. It should first of all be durable, yet comfortable, neither too hard or too soft, sustaining constant heavy use, with ease and noislessness under foot. It should be reasonably inexpensive in both original and upkeep cost. It should also display beauty of a type which develops the aesthetic appreciation of school children.

*CELLized Wood Floor Blocks combine these advantages to a degree not enjoyed by any other floor material. They will not wear out, yet are comfortable under foot and quiet. The floor is sound deadening, as the blocks are laid directly over concrete in EVERBOND, a plastic cement which provides a resilient base not possible with ordinary wood floors. The unit block is rapidly laid, and the finished floor is economically maintained.

Maple and beech blocks are used unfinished In schools there is no substitute for wood floors, with the inherent qualities of Nature's product, enhanced in efficiency by the *CELLizing process.



Front and back of 63/4" block

*CELLized wood floor blocks are guaranteed by *CELLized Oak Flooring Inc. Laid only by Licensed Flooring Contractors. The names of those licensed to use this label in your locality will be supplied upon request-



*CELLized planks and stripflooring are obtainable through licensees of *CELLized Oak Flooring Inc.

Sold through lumber dealers everywhere; manufactured by

E. L. BRUCE CO. Memphis, Tennessee THE LONG-BELL LUMBER CO. Kansas City, Missouri NASHVILLE HARDWOOD FLOORING CO. Nashville, Tennessee ARKANSAS OAK FLOORING CO.

Oak Flooring J MEMPHIS - TENNESSEE J

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The North "All-Relay" Exchange is a complete Automatic Telephone System especially designed for schools. It meets school needs exactly, giving highest operating efficiency combined with lowest operating and maintenance costs.

The "All-Relay" School Telephone System requires no operator, is always on duty ready to give rapid, reliable, and secret service at any time of the day or night. "All-Relay" stands for simplicity and the elimination of all complicated and troublesome station selectors. The latest dial type telephones are used.

The automatic "Code Call" system incorporated in the "All-Relay" Exchange gives all telephones on the system immediate access to any party regardless of his or her location in the building at the time of the call. This ensures instant and reliable contact with any member of the organization at any time of the day or night.

Write for Particulars.

THE NORTH ELECTRIC MFG.CO.



BY adding this big exclusive feature—automatic electric carriage shift—Marchant has become the only calculator that is 100% electric.

The slight pressure of a button shifts the carriage in either direction at will, one step or many, greatly increasing speed of operation while eliminating work.

Now you can operate the Marchant entirely with one hand, and by touch, while keeping your eyes on your figures. All the *work* is done electrically.

Whatever your figuring problems, you should investigate this remarkable new model at once. Ask our local representative to explain this new feature and the *five exclusive improvements* that place the Marchant in a class by itself.

Have the Marchant demonstrated on your own work, under your own office conditions. This proof of its superiority, its greater speed, its greater ease of operation, will be a revelation to you.



exclusive improvements
that place the Marchant in a class by itself

Why handicap yourself by slow, antiquated figuring methods? Learn how you can speed up all your calculations 25 to 40%—with far less work.

Sales and service offices the world over. Mail coupon for our free booklet.

Electric, hand-operated and portable models as low as \$125 17 years building calculators, nothing else



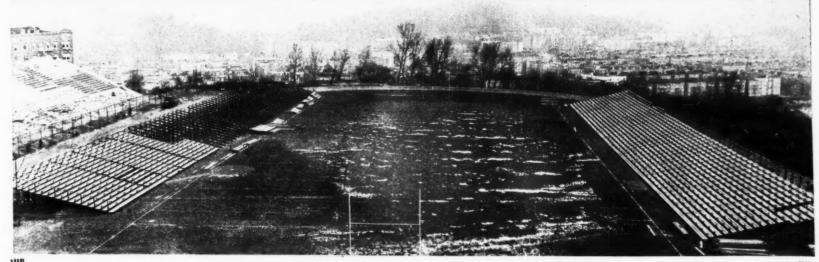
MARCI	HANT	CALCULATI	ING	MACHINE	Co.
Dept.	100,	Oakland,	Cali	fornia	

Please send me at once free literature and full information about

Marchant	All-H	Electric	Calculator
\$125 Mare	hant	Portable	Calculator

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WILLIAMS PORTABLE STADIUM



GEORGE WASHINGTON HIGH SCHOOL, NEW YORK, NEW YORK

Williams Portable Stadia are being included as standard equipment for New York High Schools athletic departments.

Their easy erection, even in the dead of

winter, for they are boltless, is an invaluable feature.

Are you acquainted with the Williams Payment Plan?

WILLIAMS IRON WORKS Inc.

430 EAST 102 nd St.



NEW YORK, N. Y.



PASSING OF WILBUR FISK GORDY

Mr. Wilbur Fisk Gordy, educator and well-known historian, died at his home in Hartford, Conn., on December 24, at the age of 75.

Mr. Gordy was the author of a number of textbooks on American history used in schools throughout the country. A number of these were banned in Chicago several years ago, in connection with Mayor Thompson's campaign against allegedly pro-British textbooks.

Educated at Wesleyan University and Marietta College, Mr. Gordy in early life taught in the public schools of Connecticut towns and became supervising principal in Hartford in 1884. After ten years in this position, he was made superintendent of schools in Springfield, Mass. He served as president of the Hartford board of education and remained a member until last year.

McANDREW CASE ENDED

—Former Supt. William McAndrew recently won his long fight for vindication when the court of Cook county, Illinois, quashed a verdict of the Chicago school board, removing Mr. McAndrew from the superintendency on charges of insubordination and conduct unbecoming his office, after a seven months' trial, the climax of Mayor Thompson's war on King George. In sustaining a writ of certiorari, the court held that Mr. McAndrew had not been guilty of insubordination and that the pro-British charges were illegally prosecuted before the board. Following the decision, Mr. McAndrew announced he would not press his claim for \$6,000 in back salary, since exoneration was his sole aim. The libel suit against Mayor Thompson was dropped by stipulation.

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The case against Mr. McAndrew opened on August 29, 1927, with his suspension on charges growing out of his opposition to school-board members in their efforts to replace extra teachers with civil service employees. His suspension was the culmination of campaign promises made by Mayor Thompson. Later, additional charges of contaminating school histories with pro-British propaganda, fostering anti-American courses, and unbecoming differences of opinion with teachers, were filed. Twenty-seven hearings were held and more than 100 witnesses testified. Mr. McAndrew was found guilty by a vote of three to two, in March, 1928, after his term of office had expired on January 8.

—Mr. WILLIAM J. BICKETT, superintendent of schools at Trenton, N. J., has recently been elected to succeed himself, at a salary of \$15,000, or a \$5,000 increase over his former salary. Credit for the fine reputation of the Trenton schools has been given to Mr. Bickett by the members of the school board, who point to him as one of the outstanding educators of the nation. In the words of the board, "he has evolved a school system which is second to none in the country, and the city should be congratulated in having such an outstanding man as the head of the schools."

—MR. HENRY J. GERLING, who has served as acting superintendent of the St. Louis, Mo., schools is to be given to permanent appointment. The board of education appointed a committee last year to locate some outstanding educator for the position. An appropriation of \$3,500 for the purpose of enabling the committee to travel to distant points to investigate applicants was voted down. While the board is not unanimous on the choice of Gerling, it is believed that he will be appointed for a term of four years, at a salary of \$11,000 a year.

—Supt. R. O. Evans, of Helena, Mont., has

—SUPT. R. O. EVANS, of Helena, Mont., has been reelected for a new three-year term beginning with August 1, 1930.

—MR. PARK SCHOCH, formerly principal of the Overbrook High School at Philadelphia, Pa., has recently been appointed associate superintendent of schools, in charge of the higher grades. Mr. Schoch, who succeeds Dr. George Wheeler, is a graduate of Union Seminary and Lafayette College.

He studied at the University of Pennsylvania and for a time taught at Drexel Institute.

—MR. FRANK H. BOREN, superintendent of the Union High School District of San Mateo, Calif., died in the Mills Memorial Hospital, following injuries received in an automobile accident.

—MR. EARL M. LAMB will retire as superintendent of schools at Dayton, Ky., with the close of the school year in June. Mr. Lamb will be succeeded by Mr. O. W. Davis, principal of the Dayton High School. Mr. Davis has been a member of the high-school faculty for the past three years, and has served as principal for two years. He is a graduate of Huntington College and is completing work leading to a master's degree at the University of Cincinnati.

—MR. JOHN R. CREEK, superintendent of schools at Herrin, Ill., recently received his Ph.B. degree from the University of Chicago. Mr. Creek completed the work for the degree during the summer months.

—Supt. V. L. Eikenberry, of Vincennes, Ind., has been unanimously reelected as head of the local school system.

—SUPT. A. T. PETERSON, of Billings, Mont., has been offered a three-year contract in recognition of his exceptionally satisfactory services during the past school year.

-Mr. O. B. Lowe, for more than fifteen years superintendent of schools at Sullivan, Ill., died suddenly on December 13, following a heart attack.

—Mr. Joseph Broderick is serving his second year as superintendent of schools at Clare, Iowa. Mr. Broderick is a graduate of the Iowa State College at Ames and has had an extended career as a teacher and superintendent of schools.

—George W. Sherman was elected president of the board of education of Akron, Ohio. He served two years as vice-president. The newly elected members of the board are Clarence R. Foust, Edward S. Connor, Mrs. Blanche E. Hower, and Mrs. Nellie Scott.

—Supt. Henry C. Taylor, of Paintsville, Ky., has been reelected for another term of two years.

Simplified Accounting System for Small Districts

Herbert N. Morse, Assistant Commissioner of Education for the State of New Jersey

As the people of this country raise and expend larger sums for the education of their children, the demand for a fuller accounting of the expenditures of their money becomes more insistent. Quite naturally, it is greatly to the advantage of the many boards of education to analyze the expenditures to the fullest extent, and to satisfy the legitimate desire of the people to be well informed concerning the expenditure of their money.

Experience has shown universally that it is important that boards of education plan their educational program on the basis of detailed cost statements of all items of expenditure. Information on the exact costs of the current year are essential for carefully preparing estimates of the costs for the next year and the several

years in the future.

The need for detailed cost statements is especially evident in working out a schoolhousing and instructional program, for as each board looks to its educational authority to suggest and recommend the full program, that authority must have a full cost analysis, as well as a pupil and population analysis of the school district

under his or her supervision.

For a number of years past, the National Association of Public-School Business Officials, whose membership consists in part of secretaries and accountants of boards of education, the National Education Association, the Department of Superintendence, and the U.S. Office of Education in Washington, have been working on the problem of obtaining uniform and detailed school-cost accounting. Now the several state superintendents or commissioners are coming to the realization of the importance of this movement. It was only a few years ago that the Office of Education at Washington, with the assistance of Messrs. Moehlman, Keough, Theisen, Dick, Jones, Hammelbaugh, Dahlman. Kincaid, Bonner, and Morse accepted as a standard for the states, a detailed educational financial accounting system, and recommended that all state departments adopt it for use in all the school districts of their states. The Office in Washington has, with the assistance of interested persons, issued a pamphlet of terminology for the various accounts, so that all the states may distribute their cost figures in a comparable manner. Up to the present time, the states of New Jersey, Indiana, New York, Pennsylvania, Wisconsin, and Idaho, have made marked progress in adopting and putting into effect the general scheme of uniform accounting as suggested by the U.S. Office of Education.

In designing a financial system of accounts for the smaller school districts, it may be advisable to plan the bookkeeping in three parts:
(1) the budget in detail, showing the cost of each item for the past year, for the current year, and the estimated amount for the next year;
(2) receipts and disbursements divided into the legal classifications as required by statute in the states; and (3) the distribution of costs segregated as required by the budget into administration, instruction, etc., on a contractual or-

der basis.

In arranging a system of this kind for use throughout an entire state, it must be borne in mind that there are several types of men and women appointed by boards of education to keep the books. In the larger districts, there is invariably the trained bookkeeper or accountant; in the smaller districts, an average business man who may be employed in a bank, or a general storekeeper, a clerk, or a farmer who can do fairly good work, is in charge of the accounts. In the smaller districts which employ ten teachers or less, and maintain no special

educational functions, the accounting system must be so designed that a person with little experience or inclination to keep books can, from his warrant stubs, make an accurate record of the expenditures as against the appropriations available. And, if this man is not skilled in making a proper contractual cost distribution, the supervising principal or county superintendent may be in a position to make the proper extensions for him at the end of the school year, so that an intelligent report may be made.

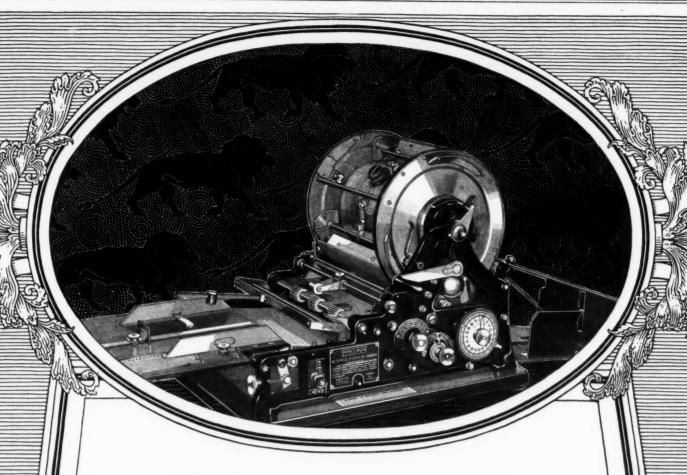
A state, in accepting a uniform system of detailed cost accounting, must give full consideration to the ability of the person engaged to keep the system adopted. The state must see that the

system is properly kept, after it is adopted, so that boards of education, through monthly and annual reports, may know the true free balance they have to expend at any meeting during the school year, or the balance to be carried over to the next year. No school board can properly administer its financial affairs without knowing its resources and liabilities. To satisfactorily handle this problem, it seems essential that definite qualifications for district clerks and secretaries should be set up by the state education department either by rule or statute. And, it further seems to be most necessary that certification be given to candidates who may meet the requisite standards, and that no secretary or

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The forms illustrated above are printed in the New Jersey simplified accounting system to form several pages. The distribution shows both the national standards as well as the New Jersey state requirements.



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"Never before has the Mimeograph and the Mimeograph process been so vital to education as now," says a prominent educator. "More pupils, more detail, more efficient organization—all these mean that executives and teachers alike must have at hand a means of speedily duplicating key ideas." The simple Mimeograph stencil process means instant, accurate duplication, in hourly thousands, of study courses, bulletins, office records, schedules, reports, questionnaires, grade sheets, etc., for school executives. And teachers are finding it indispensable for reproducing supplementary lesson sheets, problem work sheets, instruction sheets, school newspapers, maps, penmanship models and other forms needed in rapidly growing curricular and activities programs. The famous Mimeograph stencil sheets -Mimeotype, and the new Cellotype, produce perfect mimeographing at less cost than ever before. The Mimeograph can be easily operated by anyone after a few minutes' instruction. It insures needed privacy. For full particulars of its growing importance in educational work send today for interesting booklet to A. B. Dick Company, Chicago, or to branch offices in principal cities.

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Our representatives are experts in stage lighting. Their advice is gratis. One will come from the nearest city named below. His name is in its classified telephone directory.

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Minneapolis, Minn.
New Orleans, La.
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CANADA Montreal, Que. Toronto, Ont. Winnipeg, Man. THE CHARM that lies in a modulated voice, in precise, unaffected enunciation and controlled body movement is an inestimable asset in any society. Stage training imparts it as nothing else can. Are not players the most charming of people?

Retentive memory, the power of concentration, self-confidence and a sense of humor are by-products of rehearsal. More of a teacher's energy is spent in developing these social traits than in imparting information. As a conservator of that energy a stage often used is equal to a classroom most modernly equipped.

Performances of sufficient frequency to allow each pupil to be cast at least once a year give immeasurable support to every subject in the curriculum except the sciences.

Now adequate scenery and properties may be improvised or built by students. But improvised lighting cannot but be inadequate. Lighting cannot stop with making the picture merely visible; it must fill the proscenium with glamour, atmosphere and emphasis. Only lighting designed expressly for the stage, and of professional caliber can accomplish this.

Belson Manufacturing Co. 808 Sibley St. Chicago, Ill.



You Can-

Assure yourselves of perfect and continuous safety by selecting Panelboards and Switch-boards for your schools. Also you obtain equipment in that lasts as long as the building stands without maintenance, this being the next most important factor. These things combined with features of operation, etc., make Products definitely right for school building use.

Call an



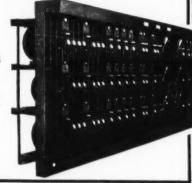
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The sales-engineering organization co-operates with your architect, engineer, contractor and yourselves on panelboard and switchboard problems. No obligation involved in finding out about this.

Frank Adam

ST. LOUIS

Offices in all principal cities



(Continued from Page 100)

clerk should be given a position without such a certificate.

The average clerk in the smaller school district must devote more of his time to keeping a uniform cost-accounting system than the present compensation given for his services will warrant. The requirement of a certificate of qualification for this work would operate both to increase this compensation, and to furnish the proper incentive for adequate service to the school district.

With these problems in mind, the New Jersey department of education has designed a system to meet the conditions just described. The department has not forgotten that boards of education must not exceed their appropriations for the school year, and also that as yet the state has set up no qualifications for either clerks or secretaries.

In New Jersey, the need for a simplified accounting system for the small district, that would preserve all the features of a complete system as used in the larger cities, has been long evident. The system here described is intended to meet that need. In formulating this simplified accounting system, it was necessary to consider the type of district for which it was designed. At the same time, it was necessary to remember that the laws of the state place upon the state board of education the responsibility for prescribing a uniform bookkeeping system in all districts. It was, therefore, necessary as well as desirable, to retain in the simplified system, all of the applicable features of the complete accounting plan as used in all districts

Approximately 200 small districts out of the 535 school districts in the state can use the simplified system. These smaller units maintain only elementary schools, with ten teachers or

FIG. 2. FORM FOR SCHOOL WARRANT The stub permits of the immediate classification and distribution of the payment.

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FIG. 4. RECORD OF RECEIPTS

less, and have no special subjects or activities. The bookkeeping is done by the district clerk, a part-time official, who does this work in his own home in the evening. He usually has no bookkeeping experience. It is obvious that, under these conditions, the conventional book-

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FIG. 5. ANNUAL SUMMARY

keeping system, with its daybook, journal, and ledger would be impossible.

The New Jersey financial school-accounting system is based on the principle that expenditures shall not exceed the appropriations. The

(Continued on Page 104)

At the Snap of a Switch Words become Reality



Kodascope, Model A, the standard 16-millimeter projector for schools



DRIVING an airplane is like drilling a hole... The man who moves a massive beam with a crowbar, thus illustrating the principle of lever-fulcrum-resistance, has that same mechanical triplet in his own arm, in the form of bone and muscle... The tongue of a steam shovel, the cutter of a

of a steam shovel, the cutter of a milling machine and the prow of a swift coast guard chaser are all examples of the same device—the wedge...The old well and the modern crane hold an astonishing kinship in their common employment of the wheel-and-axle.

Formerly there was no adequate way to explain these principles

The principles employed in simple machines are extremely important. They are extremely simple, too, when understood. But until very recently the teacher had no means of explaining them adequately, vividly. They are only a small part of a single subject that can, at best, be given only a small part of the school day. And, they involve motion—an element difficult to convey with the spoken or printed word.

Now a special motion picture does it in fifteen minutes

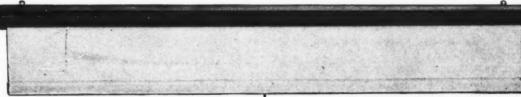
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Now when the science hour begins, the teacher can simply step up to a device and snap a switch. Imme-



The rollable School Screen, .constructed like a window shade

diately the subject leaps to life on a silvered screen, in motion pictures. In fifteen minutes the children see more than they could read in fifteen hours. A lesson that would otherwise be simply words becomes reality—an instructive, personal experience linked to everyday life.

Any teacher can use these special classroom films

Simple Machines is only one of the many Eastman Classroom Films covering important topics in General Science, Geography, Health and Civics. Any teacher can show them with the aid of a simple, efficient Eastman

Eastman Classroom Films projector and screen. Any class can derive from them the important advantages demonstrated by the Eastman educational experiment of 1928.

Send for this list

If you are not familiar with the scope of these films, clip and mail the attached coupon for "A Descriptive List of Eastman Classroom Films." It contains brief outlines of all of the films now available, as well as interesting supplementary information on the use of this new teaching aid. Eastman Teaching Films, Inc., Subsidiary of Eastman Kodak Company, Rochester, New York.

Eastman Teaching Films, Inc., Rochester, N. Y.

GENTLEMEN

Without any obligation on my part, please send me "A Descriptive List of Eastman Classroom Films."



Name....

Se. & No.....

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(Continued from Page 102)

budget allowances are controlled by the use of "contractual orders," charges against the appropriations are made when the obligation is

The simplified accounting system for small districts consists of the following forms:

- Warrant book, containing

 a) Appropriation record

 - b) Receipts record Expenditure record
- 2. Record book, containing
 - a) Budget
 - b) Contractual order record Distribution of costs record
 - d) Record of warrants issued in payment of
 - orders

Purchase Order forms

The budget consists of 85 items of possible expenditure grouped under the functional headings as follows:

Administration Instruction (supervisory) Instruction (proper) Operation

Coördinate Activities

Auxiliary Agencies Fixed Charges Library Maintenance Capital Outlay Debt Service

The budget is adopted in detail by the board of education. The amount of the district tax to be raised is approved by the voters at the annual meeting each February. This then becomes the guide to the board of education and school officials in deciding what contractual orders may be issued.

A "purchase order" form is used whenever an obligation is incurred by the board of education. All purchase orders are written and signed by the district clerk. The form is used for all ordering, the original being sent to the vendor and the duplicate retained by the district clerk. The total amount of each teacher's contract salary for the entire year is recorded on this form at the beginning of the year. The amounts of any and all contracts are recorded when the contracts are drawn.

From the purchase order, postings are made direct to the record book. These postings are made at the time when the order is written. This book is so devised that opposite each entry, the 85 items used in cost distribution, appear, so that the posting to the proper item may be



FIG. 7. UPPER PORTION OF THE BUDGET RECORD
The balance of the page includes all the main divisions and the subdivisions of the distribution of costs record in Figure 1.

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FIG. 8 PURCHASE ORDER FORM

made immediately, without repeating the date, name of vendor, purchase-order number, etc. At the top of each column in this record, the budget amount appears for that item, so that the charges against a particular item may be directly compared with the budget appropriation at any time, whether or not any payments have been made, or bills received.

Following the distribution of costs, and opposite the original entry, a place is provided for recording the warrant issued in payment of each order. A column is provided for each month, so that in the case of teachers' salaries, for example, it can at once be seen how much has been paid on account of the original order.

The outstanding feature of this record book is that one entry, properly carried through, records the order, distributes the amount to the proper account and item of the distribution of cost, and records its payment and the amount naid

At the end of each month the district clerk reports to the board of education the amount of contractual orders against each budget item. This is taken directly from the record book. Since the contractual orders include all orders written, all contracts and all contractual teach-

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(Concluded from Page, 104)

ers' salaries, this report becomes a real guide to the board of education in determining whether or not further orders can be approved, and it avoids the possibility that appropriations are inadvertently exceeded.

The warrant, or checkbook, is the other part of the system. In this instance, the warrant book has been made an official record and expanded, so that a record of cash receipts by accounts can be made and so that the stub of the warrant (check) will give the cash expenditures, not only in total, but by accounts. Thus the necessity for and the labor involved in keeping the conventional ledger record of receipts and expenditures is eliminated. A form is also provided in the front of this warrant book for recording the appropriations at the beginning of the school year.

In devising this simplified accounting system, the purpose to embody all the features of the complete system, viz., keeping expenditures within the appropriations made, uniformity within the state, and the furnishing of detailed cost information to boards of education and others. Finally, the system is so simple that any competent person may properly keep it, irrespective of his knowledge of bookkeeping.



NEW RULES AT STRATFORD, CONN.

The school board of Stratford, Conn., has adopted a number of revisions to apply to the rules governing the administration of the schools. The revised rules read in part as follows:

Within the limits of budget allowance, and in accordance with rules, regulations, and directions

of the committee, the superintendent shall order the repair of school buildings and equipment when such repairs are of minor or emergency type. Such major repairs as are approved by the school committee must be transmitted by the superintendent to the town council for action.

The town school committee will approve all plans and specifications for the construction of new buildings and improvements, or for alterations to old buildings.

Parents of high-school pupils must be notified of any deficiency at the end of every four weeks. Deficient pupils will have an opportunity to make up deficiencies by returning to school in the afternoon.

Beginning teachers desiring to qualify for appointment must be in the upper quarter of their class in the institute from which they graduate. Experienced teachers must have had at least one year of successful teaching experience to their credit. Credit toward a year's experience will not be given for substitute service unless such service has been continuous for a period of at least four months. Special class teachers will receive \$100 in advance of the regular schedule.

NEW REVERE RULES FOR TEACHERS

The school board of Revere, Mass., has adopted new rules to govern the election of teachers in the local school system. The rules, which were adopted upon the recommendation of Supt. C. F. Lindstol, are as follows:

No teacher shall be nominated by the superintendent, nor elected by the school committee for service in the elementary grades, except in the physical training and manual-training departments, who is not a graduate of an approved state normal school offering at least a two years' course of training beyond the last year of high school, or who is not a graduate of a recognized institution of higher learning offering at least a three years' course of training beyond the last year of high school, and who has not had at least one year's teaching experience.

Those qualified candidates now listed in the office of the superintendent of schools and who are graduates of higher institutions of learning other than state normal schools prior to January 1, 1928, shall meet only the requirements set forth for graduates of state normal schools.

No teacher shall be nominated by the superintendent, nor elected by the school committee for service in the junior-high-school grades, except in the physical-training and manual-training departments, who is not a graduate of a recognized college or institution of higher learning awarding a bachelor's degree upon the satisfactory completion of a four years' course of training beyond the last year of high school.

No teacher shall be nominated by the superintendent, nor elected by the school committee for service in the senior-high-school grades, except in the physical-training and manual-training departments, who is not a graduate of a recognized college or institution of higher learning awarding a bachelor's degree upon the satisfactory completion of a four years' course of training beyond the last year of high school, and who has not had at least three years' teaching experience.

had at least three years' teaching experience.

No teacher shall be nominated by the superintendent of schools nor elected by the school committee for service in the physical-training department who is not a graduate of a recognized school of physical education offering at least a three years' course of training beyond the last year of high school.

No teacher shall be nominated by the superintendent of schools nor elected by the school committee for service in the manual-training department, who has not had at least two years' education beyond the last year of high school.

Not more than one third of the new teachers hired during the school year shall be inexperienced teachers.

-The report made by Supt. Frank W. Ballou, of Washington, D. C., notes the following addition to the board-of-education rules: "The president, on his own initiative, or at the request of any three members of the board or at the request of the superintendent of schools, may direct the secretary to poll the members of the board on any matter, requiring board action, where such action is necessary before the stated meeting of the board, and it is deemed inadvisable to call a special meeting. Provided the unanimous vote of members in the city be obtained, such vote to be not less than majority of the board, the result of such poll shall constitute the action of the board, and will be so reported to the president; such action shall also be incorporated in the minutes of the succeeding regular meeting of the board."

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UNIT MOVABLE DESK SET

ERE is a modern, practical school desk that assures easy, rigid, and positive adjustment. Unlike any other style, the desk and chair supports are wedge shaped. They do not depend on bolts and nuts and, therefore, cannot work down even if the adjustment studs are only partially tightened. . . . On other types of adjustable desks, one must strain and struggle to tighten the bolts to a point where they "bind" against the supports. Such an adjustment, depending on hand-created pressure alone, cannot have the security or permanence of this Heywood-Wakefield wedge-type of adjustment. . . . This desk has many other advantages, too, that experienced school buyers will appreciate. The under structure is built of heavy gauge steel tubing; the desk box is attractive and roomy; and the swivel-type chair has a deep seat and a posture back. . . . Write to the nearest Heywood-Wakefield sales office for detailed information on this and other modern school desks.

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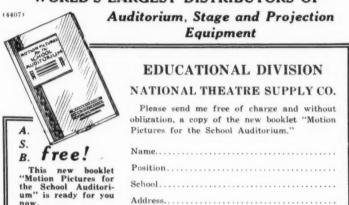
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- 5 QUIET and STURDY. Is the projector quiet in operation, sturdy in construction, long-lived, and easy on film?
- 6 "STILLS". Will the machine permit prolonged projection of stills and run film forward and backward?
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SCHOOL FINANCE SE AND TAXATION SE

THE COST OF INSTRUCTIONAL SERVICE IN NORTH CAROLINA

The state education department of North Carolina has issued a report in which it shows that the largest item in the budget for the current operation of the schools is that for instructional service. In the state as a whole, 77.2 per cent of the total expense is for this item. The term "instructional service" as used, is made up largely of the salaries paid teachers, principals, and supervisors, and small amounts spent for instructional supplies.

During the year 1927–28, there was expended a total of \$20.523,734 for instructional service, of which \$17.421,779 was expended for white schools, and \$3.101,954 for colored schools. During the year 1926–27 a total of \$19,662,734 was spent for this purpose in all the schools. During the year 1927–28, there was an increase of \$860,999, or 4.4 per cent, in the total amount spent for instructional service.

NEW YORK STATE INCREASES AID TO RURAL SCHOOLS

In line with its intention to provide increased state aid for rural schools, the legislature of New York state in 1927 provided additional apportionments to be distributed to all schools, with the larger portion to be distributed on the equalization quota plan to those school tax units within which are employed five or more teachers. Under this plan, approximately \$18,000,000 was added to the state apportionments the first year, with the provision for an additional \$6,000,000 to be added each year for three succeeding years, and to continue at the maximum amount thereafter.

III.

The 1929 legislature has extended still further the program of equalization in financing rural education within the state. Under the third stage of the program, no two-, three-, or four-teacher district will receive a smaller apportionment than is now paid under the old plan. This gives each local dis-

trict according to its need, and the minimum is fixed at \$1,500, which will be effective in 1930.

INTEREST PAYMENTS IN ILLINOIS SCHOOL DISTRICTS

The school districts of Illinois paid a total of \$4,580,325 in interest on existing indebtedness during the school year ending with June, 1928, according to a recent study of the state education department. The interest on anticipation warrants amounted to \$1,533,365, and the interest on bonds outstanding reached a total of \$2,755,462. There is a total of \$291,497 on interest of teachers' orders outstanding. The largest amount in interest payments was \$1,014,075 in Chicago, and the second largest payment was \$718,983 in Cook county, outside of Chicago. The smallest amount was \$516 in Calhoun county.

PHILADELPHIA'S SCHOOL-FINANCE PROBLEM

Through an unforeseen exigency the board of education of Philadelphia finds itself short of funds. It happened in thiswise: The uncollected taxes for 1927 amounted to $7\frac{1}{2}$ per cent of the total levy; for 1928 it ran up to $9\frac{1}{2}$ per cent. For 1929 it was estimated that there would be a drop to $6\frac{1}{2}$ per cent. Instead, the uncollected tax ran to 15 per cent. The result is that the board must secure a loan of two million dollars in order to meet current expenditures.

The schools now receive 9½ mills of the total tax yield. In order to overcome the stringency, the board of education has added ½ mill to the tax levy, thus making the total 9½ mills, or 97½ cents on each \$100 of assessed valuation. This ¼ mill will add about \$875,000 to the school fund. The addition will not, however, permit any increases in teachers' salaries as previously proposed.

ENROLLMENT AND PUPIL COSTS OF EDU-CATION IN NORTH CAROLINA

North Carolina has more children of educable age than either of its three bordering states — Virginia, Tennessee, and South Carolina, — according to a recent report issued by the State Department of Public Instruction.

The report shows that in 1927–28 the state had 848,778 children enrolled in its schools, while Tennessee, the next highest, had 80 per cent as many students, or 676,421. Virginia had during the same year an enrollment of 553,717, or 65 per cent of the state enrollment; and South Carolina enrolled 476,275 children in its schools, or 56 per cent as many as North Carolina.

It was indicated that Virginia school children have a better attendance record than those in North Carolina. While 79 out of every 100 pupils in Virginia attend school every day, only 75 per cent of the boys and girls in North Carolina make this record. The North Carolina percentage, however, is slightly better than that made by either Tennessee or South Carolina.

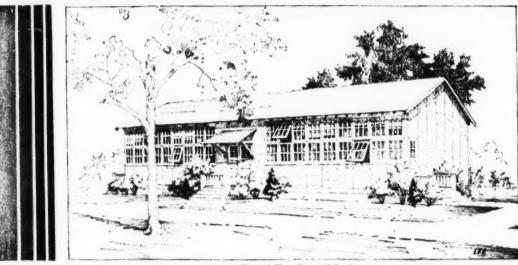
South Carolina had the largest percentage of its white enrollment, or 16.5 per cent, in the high school. North Carolina ranked second among the four southern states, with 15.3 per cent of its total white enrollment in high school, and Tennessee 11 per cent.

The factor of percentage of enrollment in the high school is closely related to per-pupil costs of education and the number of pupils per teacher, educational officials pointed out. Tennessee, with the lowest percentage of white pupils in the high school, had an average teaching load of 36, while South Carolina, with the highest percentage in high school, had an average teaching load of 28. Virginia had an average of 31 pupils per teacher employed, and North Carolina had 32.

FINANCE AND TAXATION

—The Brisbin Borough School, located near Clearfield, Pa., is in trouble. The school board has resigned and also the teachers. The state department has taken charge and conducted the school and paid the teachers who received no salary during the year 1929. The district is in debt to the extent of \$7,000, owing to the fact that the taxes had not been collected.

— The affairs of the school board of Perry, Iowa, were subjected to an audit by the state examiners, covering a period of five years. They found the schools in excellent condition but "questioned the economic practices used in putting them in condition." The examiners pointed out a disregard of



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law requiring advertisement for bids and competitive letting for schoolhouse repairs in excess of

—When the Webster parish school board at Minden, La., found itself confronted with a \$49,000 deficit, it asked the voters for an additional 1-mill tax which was carried with an overwhelming majority, both in property and numbers.

—Rockford, Ill. The school board has adopted

a budget, amounting to \$2,000,000, for the school vear 1930. The total appropriation for the year 1929 was \$1,921.864.

-West Hartford, Conn. The school board has asked for an appropriation of \$533,000 for the operation of the schools during the school year 1930-31. This is an increase of more than \$60,000 over the amount asked last year.

-Beverly, Mass. The school board has adopted a budget for the school year 1930-31, calling for an expenditure of \$496,766, of which \$388,691 is

for salaries, and \$108,075 for maintenance.

—Joliet, Ill. The school board has sold an issue of \$125,000 in tax-anticipation warrants to local banking houses. The warrants draw interest at the rate of 6 per cent and are payable on or before June, 1930.

-The city board of finance of New Haven, Conn., has asked the board of education to explain a recent request for \$16,000 of additional funds to meet a deficit for the period ending with December 31, 1929. It was pointed out that this could be done, inasmuch as the items making up the \$16,000 will be used this year, and not during the

Recently, the school board asked for \$7,000 to make up a payroll deficiency, and this was approved, but when the second voucher was presented, the board asked for time to see what could be done to correct the situation

-Chicago, Ill. Reductions amounting to \$31,-040 in the legal department of the school board have been made as a result of the attempt to limit the budget to \$87,500,000. All of this is included in the educational fund, in which the board faces a cash deficit of \$7,000,000. The appropriations for the secretary's office have been reduced from \$6,500 to \$1,500.

-Indianapolis, Ind. The fact that the new state-aid school law became effective on January 1, instead of nine months later, has cost the taxpayers about \$25,000 to \$30,000. The increase of the state-aid appropriation from 30 to 45 per cent will remove \$25,000 to \$30,000 from the fund which ordinarily was received by the school system. An increase of five mills in the school city tax rate will be necessary to eliminate any deficit that may

The new distribution is on a basis of 45 per cent of the seven-cent school-tax levy, instead of 30 per cent as under the old law. The remainder is for distribution to school units on a basis of school

It is anticipated that the reduced revenue will accrue to school units on the enumeration basis and will work a hardship on school districts that are on the border line of state aid. Their revenue, under the law, will be reduced from 70 to 55 per cent of the school-tax funds.

Under the 45 per cent distribution, the state education department will have available \$1,800,000 for the state-aid school units, about \$700,000 more than was anticipated.

-Lorain, Ohio. A pay-as-you-go plan to finance the construction of new school buildings has been adopted by the school board with the creation of a special building-improvement account. Approximately \$20,000 has been left in the general fund as the nucleus of a fund for building improvements. The fund will be increased by regular annual appropriations, until the accumulation is of such size that it will take care of all building construction without resort to bond issues.

-Rockford, Ill. The school board has prepared a budget, calling for \$2,000,000. It includes an appropriation of \$50,000 for increases in the salaries

-Joliet, Ill. The school board has taken steps to dispose of \$120,000 in tax-anticipation warrants for school purposes. The warrants draw 6 per cent interest and are payable on June 1.

-The taxpayers school dollar paid in Ohio is expended in the following proportion: Instruction, 51.4 cents; operating costs, 19 cents; debt service, 11.4 cents, and new buildings, 15.2 cents.

-Hartford, Conn. The West Middle School District has joined with the South School District in asking the board of finance to include in its budget appropriations for the next fiscal year, an amount sufficient to pay pensions to teachers. The school district officials contend that the pension item is one which is justly chargeable to maintenance expense. The budget estimate of the South District contains an item of \$2,000 in anticipation that one or two teachers may desire to retire

-Waterloo, Iowa. The westside school board recently retired two warrants, totaling \$10,825, which reduces the value of unpaid warrants to \$33,-175. The sum represents a decrease of \$81,000 from the \$114,000 in unpaid warrants carried two years ago.

-Chicago, Ill. With the passing of the financial crisis on the school board, the members of the Strawn rescue committee have taken up the matter of the legality of the plan of County Treasurer George F. Harding to relieve the city of its financial difficulties. Mr. Harding has proposed that the wealthiest taxpayers and the larger corporations pay their taxes in advance by purchasing approximately \$23,000,000 of tax-anticipation warrants now held by the city. The warrants would later be held as receipts for taxes paid. A committee of economists will be asked to review the work of the survey committee with the idea of recommending legislation which will prevent a recurrence of the present financial situation.

-The Chicago board of education, which finds itself confronted with an enormous deficit, contemplates a cut of \$2,250,000 in the budget for 1930. If this cut is approved, it will eliminate penny lunches, administrative assistants, vacation schools, vocational night classes, and dental work for the children.

-The school dollar of the District of Columbia, according to a report made by Supt. Frank W. Ballou, is expended as follows: general control, 11/2 cents; capital outlay, 211/4; coördinate activities, 1/4; operation of school plant, 81/2; auxiliary agencies, 1/2; maintenance of school plant, 53/4; fixed charges, 31/4; instruction, 59 cents.

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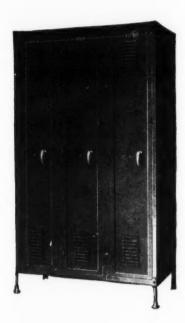
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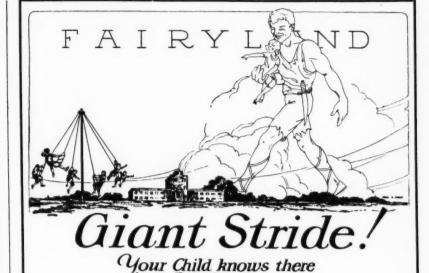
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Makers of Gymnasium Apparatus, Playground Equipment, Steel Lockers, Steel Cabinets and Junior Line for the Home Playground.

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Off to FAIRYLAND with the stride of a Giant. Childhood is a life of adventure in the fields of imagination. Fanciful explorations keep the little minds active and thus develop the mentality.

is a Fairyland ~ ~

The playground is more than a place in which to while away play hours . . . it is the school of both body and mind. Through active, constructive play, the body is made sound and healthy; the mind is developed as the imagination is encouraged.

The kindergarten, the primary school, and the playground provide the start to education through the exercise and direction of the fairyland instinct.

The Medart organization has been active in the playground movement from its inception—making playground apparatus appealing to child imagination. But back of all that is the safety and durability achieved through fifty-seven years of highly specialized manufacturing experience. Write for the catalog of Playground Apparatus.

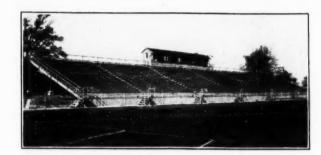


FRED MEDART MANUFACTURING CO. Potomac and DeKalb Sts., Saint Louis, Mo.

Manufacturers of Steel Lockers, Steel Shelving, Steel Cabinets, Gymnasium and Playground Apparatus.

A safe, modern, all-steel grandstand for athletic fields

Further information concerning the Pitts-burgh-Des Moines all-steel grandstand will be furnished you upon request. Ask about the deferred payment plan. No obligation for any information requested.



Here pictured is a Pittsburgh-Des Moines all-steel grandstand built for the Miami University at Oxford, Ohio. Seating capacity 2,880 persons. It is the second of two all-steel grandstands erected for the Uni-

Maximum Seating Capacity at Minimum Cost

Pittsburgh-Des Moines all-steel grandstands furnish a maximum seating capacity at a minimum cost. Safe, comfortable and up-to-date seating facilities are inducements that result in record crowds.

The cost? Our deferred payment plan takes care of that. A Pittsburgh-Des Moines grandstand will earn its own cost.

Pittsburgh-Des Moines Steel Company

89 Neville Island, Pittsburgh, Pa. 991 Tuttle St., Des Moines, Ia. 693 Hudson Terminal Bldg., New York, N. Y.

Model Rules for Governing Fire-Exit Drills

The National Fire Protection Association of Boston, Mass., has issued a new circular governing fire exit drills and alarm systems for schools. The rules

are as follows:

The purpose of fire exit drills is to insure the efficient and safe use of the exit facilities available. Proper drills insure orderly exit under control and prevent the panic which has been responsible for the greater part of the loss of life in the major fire disasters of history. Order and control are the primary purposes of the drill. Speed in emptying buildings, while desirable, is not in itself an object, and should be made secondary to the maintenance of proper order and discipline.

of proper order and discipline.

Drills should be held frequently to be effective. Fire is always unexpected. Drills should be so arranged that they will insure orderly exit under the unusual conditions obtaining in case of fire. For this reason, drills should be habitually held in unexpected ways and at unexpected times. If the drill is always held in the same way at the same time, it loses much of its value, and when for some reason in actual fire it is not possible to follow the usual routine of the fire exit drill to which the occupants have become accustomed, confusion and panic may ensue. Drills should be carefully planned to simulate actual fire conditions. Not only should they be held at varying times, but should use different means of exit, assumption being made, for example, that some given stairway is unavailable by reason of fire or smoke, all the occupants being led out by some other route. Fire exit drills should be designed to familiarize the occupants with all available means of exits, particularly outside stairs and other emergency exits that are not habitually used during the normal occupancy of the building.

In order to secure proper order and control, it is essential that the plan and conduct of the drill be in the hands of responsible persons competent to exercise leadership who have been carefully schooled in what to do in case of fire emergency.

Satisfactory fire exit drills depend upon some suitable fire-alarm system, which should be in accordance with section 10. The fire alarm should be regularly used as the signal to start the fire exit drill.

Fire fighting should always be made secondary to life safety. Where there is a regularly organized private fire brigade, instructions should be given to defer any fire-fighting operations that might interfere with prompt and orderly exit until after buildings are vacated. Especial emphasis should be laid on not obstructing lines of exit by means of fire hose laid across stairways, and not blocking open, protecting fire doors by hose lines, until all occupants are out of danger.

The usefulness of a fire exit drill and the extent to which it can be carried depends upon the character of the occupancy, it being most effective in occupancies where the population of the building is under discipline and subject to habitual control. For example, schools offer possibilities of more highly developed and valuable fire exit drills than other types of occupancy.

In buildings where the population is of a changing character and not under discipline, for example, in hotels or in department stores, no regularly organized fire exit drill, such as that which may be conducted in schools, is possible. In such cases the fire exit drills must be limited to the regular employees who, however, can be thoroughly schooled in the proper procedure and can be trained to properly direct other occupants of the building in case of fire. In occupancies such as hospitals, no regularly constituted fire exit drill is practicable. Here again, however, the regular employees can be rehearsed in the proper procedure in case of fire; such training always is advisable in all occupancies whether or not regular fire exit drills can be held.

Sec. 1170. The following requirements are of necessity, general in scope, as it is appreciated they must apply to all types of schools as well as conditions of occupants, such as truant schools, schools for mentally defective, the blind, the deaf and dumb, colleges, and public schools. It is fully recognized that no one code can meet all the con-

ditions of the various buildings involved, and it will be necessary for some school authorities to issue supplements to these requirements, but all supplements should be consistent with these requirements.

Sec. 1171. There shall be at least eight fire exit drills a year. In those climates where the weather is severe during the winter months, it is suggested that weekly drills be held at the beginning of the school term so as not to endanger the health of the pupils.

Note: It might be well to hold "practice" drills during inclement weather. Such drills would be held at the regular dismissal time, when the pupils are fully clothed, by using the exit-drill alarm signal. With such drills there would be no necessity of a return signal.

Sec. 1172. Drills should be executed at different hours of the day or evening; during the changing of classes; when the school is at assembly; during the recess or gymnastic periods. In other words, they should be executed at such irregular times as would tend to destroy any possible distinction between drills and actual fires. Cards of instruction should be conspicuously posted describing the procedure of the drills.

Sec. 1173. If a drill is called when pupils are

Sec. 1173. If a drill is called when pupils are going up and down the stairways, as during the time classes are changing without any semblance of order, the pupils should be instructed to form in file and immediately proceed to the nearest available exit in an orderly manner.

Sec. 1174. Exit-drill alarm systems should be installed in accordance with the requirements of Sec. 10 of the code. All exit-drill alarms should be sounded on independent signal systems, and not on the signal system used to dismiss classes. Instructions in the manner of sounding exit-drill signals and sending fire alarms should be given to all pupils so that there will be no delay either in emptying the building or calling the fire department in case of an actual fire. Whenever any of the school authorities determine that an actual fire exists, they shall immediately call the local fire department using the public fire-alarm system. In order that pupils will not be returned to a building

(Concluded on Page 114)



NEW EFFICIENCY FOR THE SCHOOL WASHROOM

with the new "SF"

Dries Quicker—and Better—than a Towel"

The new "SF" Sani-Dri brings a new efficiency to the school washroom. It vastly enhances sanitation, does away with the unsightly and unsanitary towel, and speeds up washroom drying service. With its twelve vital improvements the new "SF" Sani-Dri is immeasurably superior to any other form of drying service for your school. Its sturdy, mischief-proof construction insures permanent,

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trouble-free operation every day of it costs less than any other drying the school year. And its economy over obsolete drying methods has been demonstrated in hundreds of typical installations.

SEE IT **DEMONSTRATED** AT THE N. E. A. EXHIBIT (Atlantic City, Feb. 22-27) **BOOTH K-14**

You are cordially invited to visit the Sani-Dri Exhibit, Booth K-14, at the N. E. A. Convention, Atlantic City, Feb. 22-27. Here you will find the new "SF" Sani-Dri being demonstrated, and you will have a splendid opportunity to learn why its "Twelve Points of Perfection" make it the most satisfactory of all dryers for your school.

There are many advantages possessed by the new "SF" Sani-Dri that you should know at first hand. If you do not have an opportunity to visit our Exhibit at the Convention, we urge you to send for our book "Twelve Points of Perfection," which will be mailed to you promptly upon receipt of coupon below. Find out for yourself why the new "SF" Sani-Dri is faster, quieter, more thorough - why

service—why it is so dependable that you can install it in your washrooms and forget your drying service problem permanently.

Electrical Division

CHICAGO HARDWARE FOUNDRY COMPANY NORTH CHICAGO, ILLINOIS



Would you like a copy of this fact-filled book?

"Twelve Points of Perfection" tells the complete story of the new Sani-Dri in a most interesting manner. Every school executive should have a copy of this book. Your copy will be mailed promptly if you will fill out and send us this coupon. Why not do so now?

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THE AUTOMATIC LOCKING—

"Super Special" Keyless Padlock

THE "Super Special" is a rugged, durable padlock, practically fool-proof, It cannot be left unlocked because the combination is completely thrown off when shackle is snapped shut. Combination must then be re-operated. Here is the advanced Locking-Device, developed to assist especially in reducing or eliminating administrative effort—and expense—in connection with large lock installations in Schools and for similar situations elsewhere.



Production of this unusual lock is the result of extended study and shackle diameter 5-16" to fit standard padlock attachments on lockers. observation of the actual conditions covering large lock installations of all types, as well as many years of specialized experience in making and supplying keyless padlocks and rim-locks for use under extremely varied operating conditions, and requirements.

Just as on previous "Original Click System" keyless locks supplied by this company "Super Specials" are being made up on an individualized production basis to meet the customer's specific requirements neatly. Diversified combination range, special serial numbering, extended guarantee, liberal co-operation, supplementary Service Record with suggestions and instructions are part of the Service put forth in the interest of all concerned.

Sample padlock and special proposition will be sent promptly upon request, to Operating Officials of Schools, Universities as well as others in charge of large installations.

A perfected keyless padlock - of greater mechanical excellence, extremely economical in reference to first cost and maintenance, constructed on the "Original Click System" principle—is offered for greater service on Lockers and Allied Equipment.

Buy Experience and Service — It's Cheaper THE I. B. MILLER KEYLESS LOCK CO.

KENT, OHIO, U. S. A.

"ORIGINAL CLICK SYSTEM" KEYLESS LOCKS

which is burning, the recall signal shall be one that is separate and distinct from and cannot be mistaken for any other signals. Such signals may be given distinctive colored flags or banners. If the recall signal is electrical, the buttons should be kept under lock, the key for which should be in the possession of the principal, or some other designated person in order to prevent a recall at a time when there is a fire. Regardless of the method of recall, the means of giving the signal shall be kept under a lock.

Sec. 1175. As all drills represent an actual fire condition, pupils should not be allowed to obtain clothing after the alarm is sounded, even when in homerooms, on account of the confusion which would result in forming the lines and the danger of tripping over dragging apparel. In order to avoid congestion around the school building, which might interfere with the local fire department, each class or group should move to a predetermined

Sec. 1176. Wherever possible, drill lines should not cross a street or highway, especially where the traffic is heavy. Where necessary for drill lines to cross roadways, hand signals reading "Stop, School Fire Drill," should be carried by monitors to the traffic intersecting points in order to stop traffic during the period of the drill.

Note: It is recommended that where drill lines cross roadways, a police officer, school janitor, or a male teacher acting as a traffic officer be on duty to control

traffic during drills.
Sec. 1177. Every fire exit drill shall be an exercise in school management for principal and teachers. The chief purpose of every drill is complete control of the class so that the teacher will form its ranks quickly and silently, may halt it, turn it, or direct it as desired. Great stress shall be paid upon the execution of each drill in a brisk, quiet, and orderly manner. Running should be prohibited. In case there are pupils incapable of holding their places in a line moving at a reasonable speed, provisions should be made to have them taken care of by the more sturdy pupils, moving independently of the regular line of march.

Sec. 1178. Monitors shall be appointed from the more mature pupils to assist in the proper execution of all drills. They shall be instructed to hold open doors in the line of march and assist in every practical manner to create an orderly and perfect drill. There shall be at least two substitutes for each appointment so as to provide for proper performance in case of absence of the regular monitors. The searching of toilet or other rooms shall be the duty of the teachers or other members of the staff. If the teachers are to do the searching, it should be done after they have joined their classes to the preceding lines. If, for any reason, a line becomes blocked, some of the pupils should be countermarched to another exit in order to prevent panic conditions arising as a result of inactivity.

Sec. 1179. It shall be the duty of principals and teachers to inspect all exit facilities daily in order to make sure that all stairways, doors, and other exits are in proper condition. Particular attention should be given to keeping all doors unlocked, having doors closed which serve to protect the safety of paths of egress (such as doors on stairway inclosures) and under no conditions, blocked open, keeping outside stairs and fire escapes free from all obstructions and clear of snow and ice, allowing no accumulation of snow or ice of materials of any kind outside exit doors might prevent the opening of the door or interfere with rapid escape

from the building.

Any condition likely to interfere with safe exit should be immediately corrected if possible, otherwise reported at once to the appropriate authori-

CHATS DURING RECESS

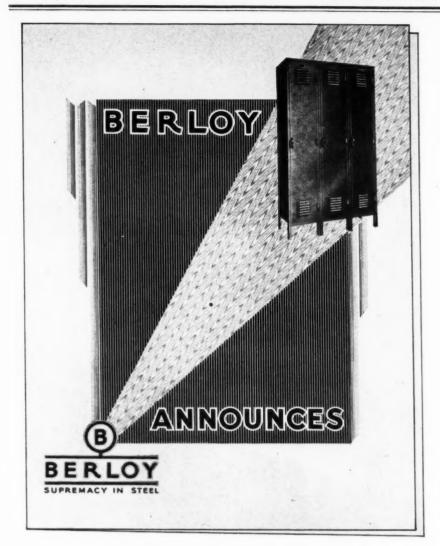
"Meetings of the local board of education almost Illinois, Journal. "So many of the regularly scheduled board meetings resolve into reading of perfunctory consideration of routine business, a chorus of ayes and noes and a welcome adjournment. Not so the deliberations of the board that supervises the education of Springfield school children. Heated discussions, punctuated by verbal fireworks, are the rule. The casual visitor would be amused by the word duels and the personalities that are projected across the conference table. Spirited participation in such meetings bespeaks a deep interest in school affairs. The proper education of its youth should be a paramount consideration of every community. Springfield chooses to take its school problems seriously. What matter if toes are trodden upon occasionally?'

The editor of the Kokomo, Indiana, Tribune has this to say: A school superintendent, who ought to know something about young people, protests the use of the phrase "flaming youth" in a derogatory sense. Youth is flaming, gloriously so, he declares. It is unjust to restrict that phrase to such implications as lawlessness, extravagance, excess, sensual-

ity, rebelliousness.
"Might it not better come to mean," he asks, "in press and public mind, the courage and the dauntlessness of the lad who slipped alone into the darkness of the sky and sea to achieve the conquest of air and ocean, or the spirit of the boy who dared venture out between heaven and sea upon the guid-ing plane of the Graf Zeppelin to repair damage which threatened the success of his father's craft? Was it not, indeed, 'flaming youth' that went forth to lay down their young lives upon the field of battle?"

It is not hard to think of other occasions when high spirits, courage, heroism and enthusiasm marked the acts of flaming youth. If, sometimes, the flame lights perilous conflagrations, does not the fault lie with those elders who have upheld before the youth of the land wrong standards of romance and adventure?

"The public schools are not maintained for the purpose of spreading propaganda - good or bad. They are not, must not, be advertising agencies," says the School Bulletin of New Castle, Pa. "How cleverly some people disguise their pet projects and attempt to have the schools adopt them under another name! Teachers and school officials must constantly be on their guard against the exploitation of the schools."



The RIGIDOR! — A NEW AND IMPROVED STEEL LOCKER

Berloy again takes the initiative in steel locker construction with the recent introduction of the new Rigidor.

Construction accent has been placed upon the only moving part—the door. Stamina that has created a new standard of locker performance has been built into this improved door. Silencing features have been added. No changes have been made in the body of the locker because we do not believe it can be improved.

We offer this locker as a structural achievement of interest to every school executive who participates in the selection and purchasing of school equipment.

If you anticipate increased locker facilities in 1930, you will want to see the Rigidor demonstrated. Our closest representative will be put in touch with you upon request.

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Fifteen branch warehouses

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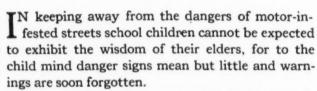
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A fence conveys its own commands and compels their obedience. Only with a fence can you *enforce* safety. Only with a fence can little feet be kept on the playground.

Anchor Playground Fences are substantial, durable and attractive. Their points of superiority will be explained by Anchor representatives who are located in principal cities. Consult your telephone book or write for complete Catalog.

ANCHOR POST FENCE COMPANY Eastern Avenue and Kane Street, Baltimore, Md.

Albany, N.Y., Boston, Charlotte, N.C., Chicago, Cleveland, Detroit, Hartford, Houston, Indianapolis, Los Angeles, Mincola, N.Y., Newark, New York, Philadelphia, Pittsburgh, San Francisco, St. Louis, Shreveport.

Sales Agents in other principal cities. Consult your 'phone directory.



"MADE BY THE MAKERS OF AMERICA'S FIRST CHAIN LINK FENCE"



A GUARDIAN OF HEALTH!

Water flowing from R-S drinking fountains is pure - - - free from the contamination of lip contact - - - just a good, refreshing drink safeguarded by a patented Vertico-Slant feature. This arrangement provides a slight slant steam which prevents water from falling back upon the jet.

Let us give you complete information covering the line of Rundle-Spence Sanitary Drinking Fountains.

RUNDLE-SPENCE MFG. CO.
51 Fourth Street
MILWAUKEE, WIS.





Although much progress has been made in recent years, fire still takes its annual toll of hundreds of thousands of dollars of school property. And upon analyzing the origins of school fires we find that carelessness in the handling of refuse and waste material continues to head the list of fire causes.

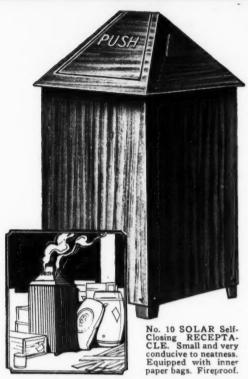
Fire hazard is materially lessened when the SOLAR Self-Closing RECEP-TACLE is used for waste disposal. Built of steel, the SOLAR itself cannot burn, and due to special design and construction, it acts as an effective barrier against the spread of any fire which might start.

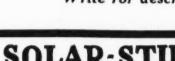
The automatic, gravity-operated cover which is always closed except for the brief interval when waste is actually being deposited, guards against the danger of sparks, matches, lighted cigars or cigarettes, hot coals or other fire causes. Even should combustion start within the SOLAR itself, the patented cover would prevent any flames whatever from going beyond the walls of the receptacle itself. The fire might smother itself or smoulder for hours, but no flame would leap out to ignite other material or nearby walls.

Fire protection through the use of SOLAR Self-Closing RECEPTACLES is not expensive, for the SOLAR actually saves its

own cost in a surprisingly short time through lowered cleaning costs. Let us explain more fully the value and economy of the SOLAR system.

Write for descriptive literature.





SOLAR-STURGES MFG. CO. MELROSE PARK



Easy to Use Safe to Use Easy to Empty Attractive

MASS TREATMENT OF CHILDREN WITH ULTRA-VIOLET RAYS

It has been noticed that there is a period of eight months in each year during which the amount of ultra-violet rays reaching the ground in the large cities is very much diminished. Considerable study was given to the problem of supplying children with ultra-violet radiation on a mass scale. This study led to the development of the Goldberg unit, an apparatus for the mass treatment of children with ultra-violet rays. The device was designed by Dr. Benjamin Goldberg, of Chicago, and was first installed in the Spalding School for Crippled Children, in which a large number of children have bone tuber-culosis

In the Spalding School, the special problem of the crippled children was considered. It is almost impossible to handle in a mass, crippled children with various types of deformities, and it is difficult to move them in and out of the arc of treatment in such a way that they will receive accurate dosage. As a solution of this problem, it was decided to make use of mercury quartz lamps combined in one unit in such a way as to meet the needs of the crippled children, or the needs of all children.

The apparatus consists of a sheet-metal "sun-room," 8½ ft. wide, 20 ft. long, and 9 ft. 2 in. high. The sunroom is elevated about 15 in. from the floor, and is approached at both ends by ramps, 6 ft. in length, graded 2½ in. to the foot. The room is open at each end and a conveyor, on the endless chair principle, runs its entire length.

endless-chain principle, runs its entire length.

The conveyor is adjustable in speed by means of a tachometer control. The rate is controlled by a speed-reducing unit, which enables the conveyor to travel the length of the chamber at speed variations for the distance of from 45 seconds to 4½

minutes. Running down the center of the conveyor are two heavy black lines about 9 in. apart. The children to be treated stand between these lines during their passage through the sunroom.

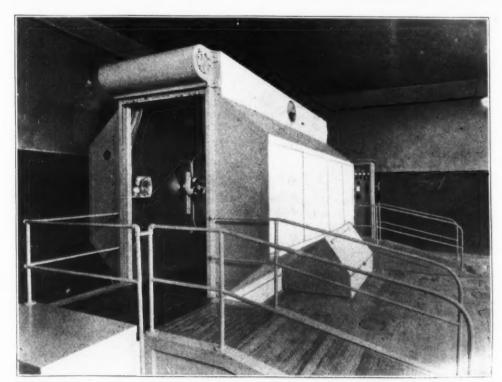
On each side of the chamber, or sunroom, $2\frac{1}{2}$ ft. from the floor, are placed three Uviarc lamps, making a total unit strength of six mercury quartz lamps. The lamps are supplied with special adjustable reflectors, constructed to give an even distribution of light at all angles. Additional reflection is obtained because of the fact that the whole interior of the chamber is coated with aluminum paint.

In order to maintain a comfortable temperature

level, exhaust fans are located at the top of the chamber. These fans promote a breeze of about ten miles an hour and afford a twofold advantage of reducing the temperature and supplying air currents to the skin.

A control board at one end of the unit allows individual control of each arc unit within the chamber, and also, by means of the tachometer, permits the necessary regulation of the speed.

Under the arrangement, children on wheelchairs, on stretchers, and on crutches may be accommodated on the graduated ramp which approaches the entrance. The children are placed between the



ULTRA-VIOLET APPARATUS USED IN SPALDING SCHOOL FOR CRIPPLED CHILDREN, CHICAGO



"Proper attention to the care and preservation of your floors," says 'Neut,' "calls for

Shine-All

The Neutral Liquid Cleaner

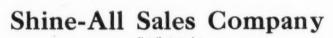
"Neut" Stands for:

NEUTRAL—Shine-All is free from alkali, ammonia, lye, and harmful abrasives.

E FFICIENT—Shine-All cleans, polishes and preserves all in one operation—cutting labor and money—has earned the endorsement of leading manufacturers of all types of flooring.

UNIVERSAL—Shine-All is the one cleaner which meets the requirements of all types of floors—rigid or resilient.

THOUSANDS of building managers and superintendents all over the country find Shine-All indispensable. A Trial will convince you.



Hillyard Chemical Company

St. Joseph, Mo., U. S. A.



two lines; in their course through the sunroom they are kept equidistant from the two sides of the battery units. Standing, or in wheelchairs, between the lines, they are at a distance of approximately 40 in. from each side.

Here's the Shine-All Soldier,

Just call him "NEUT." He guards all your floors,

And makes dirt scoot.

Copyright 1930

Depending on the amount of exposure they have had, the children are coursed through the sunroom at any indicated speed, varying from 45 seconds to 4½ minutes. They are sent through in groups based on relative sensitivity and are carefully observed for results.

Approximately 250 children can be handled in an hour with the aid of the new sunroom apparatus. A large number of children have been treated with the apparatus and careful data is being prepared for further study.

BUILDING NEWS

—The school board of Mathis, Tex., has called an election to obtain the consent of the voters for a \$45,000 bond issue for school-building purposes. The building program calls for the erection of the first unit of a high school, and for the remodeling of the present building.

—Sonora, Tex. The school board has called for bids for the construction of a two-story school building, to cost \$125,000.

—The Texas Teachers' Association has completed plans for a two-story headquarters building, to be erected at Fort Worth. Plans for the building were prepared by W. G. Clarkson & Company, of Fort Worth.

—The voters of Hearne, Tex., have approved a bond issue of \$110,000 for a high school, a Negro school, and the remodeling of the old building. The plans for the high school were prepared by Page Brothers, of Austin.

—Talladega, Ala. An elementary school to take care of the children of employees of the Bemis Bag Company has recently been completed, at a cost of \$60,000.

A home-economics cottage has been erected near the high school. The cottage, which contains a dining room, a living room, two laboratories, a bath, and storage rooms, is the gift of Mrs. Louise A. Jemison, of Talladega.

—Annapolis, Md. The building program of the school board of Anne Arundel county has been delayed until after the next fall election.

—Reading, Pa. The school board will shortly

—Reading, Pa. The school board will shortly ask the approval of the voters for a loan of \$2,000,000 for school purposes. A junior-high-school building has been proposed.

ing has been proposed.
—Spokane, Wash. The school board will call an election to obtain the consent of the voters for a bond issue of \$1,000,000 for the school-building program. The program which covers a period of five years, provides for the erection of a high school, and for additions to six existing structures.

—Altoona, Pa. The school board has sold \$800,-000 in school bonds, the proceeds of which will be used in part payment for schools taken over from Logan township, and for paying off the debt on the Keith Junior High School. The bonds were part of an issue of \$2,000,000 recently granted by the voters.

—Upper Darby, Pa. The school board has sold \$500,000 in bonds, the proceeds of which will be used to complete a schoolhouse under construction.

—The new building of the Joseph Heberle School, at Cincinnati, Ohio, was occupied on January 2. The building which accommodates between 1,100 and 1,200 pupils, draws its enrollment from four schools, with provision for kindergarten, elementary, and sight-saving classes.

—Portsmouth, Ohio. Three bond issues in the amount of \$138,000 to provide for the erection of seven schools in Scioto county were recently sold when three village and township school boards received bids.

—The New York City board of education has approved the plans for the first modernistic school building, known as the Ridder Junior High School, to seat 3,000 students and to cost \$1,172,000.

to seat 3,000 students and to cost \$1,172,000.

—Grand Rapids, Mich. The school board has adopted tentative plans calling for an expenditure of \$400,000 for school construction work during 1930.

—New York, N. Y. The school board has approved appropriations totaling \$323,571 in payment for four school sites in Queens, Richmond, and Brooklyn boroughs. The largest single item was

for a site in Corona, which cost \$181,066.

—Detroit, Mich. A taxpayers' suit has been begun in the circuit court, charging the local board of education with improper use of its discretionary power in proceeding over the veto of the mayor in accepting, at an alleged exorbitant cost, the jury award in condemnation of land for a new school. It was pointed out that a site five blocks nearer the residential section was available at a cost of \$32,000, but was rejected in favor of a site costing \$52,248. The mayor had vetoed the action of the school board on the ground of extravagance, but his veto was overridden by the board members.

—Detroit, Mich. The new building program of the school board calls for the construction of the first unit of a new high school, an intermediate school, ten elementary schools, and additions to three high schools and sixteen elementary buildings. The budget of the school board contains a request for \$9,045,369 for new schools, and \$1,250,000 for an administration building and an addition to the supply warehouse. The new structures will take care of an anticipated increase in the school population and provide facilities for the 4,350 pupils in portable buildings.

—Cincinnati, Ohio. The school board recently held a sale of school bonds in the amount of \$2,300,000. The bonds will carry an interest rate of 4½ per cent, and will provide funds for the Walnut Hills High School, the Oyler School, and an addition to the elementary school.

—Elgin, Ill. The voters recently voted down a proposal to bond the city for \$600,000 to erect two junior high schools.

—Portsmouth, Ohio. School bonds totaling \$138,000 for the erection of seven school buildings have been sold by township boards of education in Scioto county. The Portsmouth city school board has received bids for the erection of the Roosevelt School, to cost \$112,000. Three buildings now under construction will be completed at a cost of \$600,000.

—Mr. M. E. Harpster, architect, of Akron, Ohio, has been chosen by the school board of Cuyahoga Falls to have charge of the \$100,000 building program to be begun in 1930.

Draper Adjustable Window Shades

"To Draper-ize Is To Standard-ize"

To/SC/100/5/



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N. E. A.
CONVENTION
ATLANTIC CITY, N. J.

FEBRUARY 22-27

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Top light is the most valuable light that comes through a window. It is the light you may enjoy at all times if your windows are equipped with Draper Adjustable Shades. Draper Shades obstruct glare and permit the soft, luminous top light to enter.

Draper Shades are an important aid to proper ventilation through windows. With Draper Shades, windows may be lowered from the top, so as to permit an overhead circulation of air, without draft, and without the obstruction or flapping characteristic of the ordinary shade.

Draper Means Standard

Draper Adjustable Shades have become the standard shades of America. Schools, colleges, public and private institutions and buildings of every description, from coast to coast, are Draper-equipped.

New schools are springing up all over the country and are insisting on the Draper. It is the ideal window shade for schools. In your building plans for the coming year, be sure to specify the Draper Adjustable Shade. Or if you are making improvements, change to Draper. You owe it to your pupils.

Send us your specifications and let us give you an estimate-



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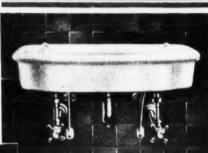
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Sanitation's Sure in this gymnasium

Men's Gymnasium, State College of Washington, Pullman, Wash.





"Health Safe" Features

Automatic stream control, two-stream projector distinguishing features that make Halsey Taylor Fountains outstanding in promoting sanitation and convenience.



SCHOOL AUTHORITIES ENDORSE THEM

Their record of satisfactory performance, their distinctive design, their freedom from annoying servicing troubles—these factors make Halsey Taylor Drinking Fountains the ideal choice of school building authorities from coast to coast. School officials endorse them, appreciating their many exclusive and patented features which promote positive sanitation. For replacements or new construction you'll find them equally desirable!... The Halsey W. Taylor Co., Warren, O.

Be sure to write for our School Superintendents' Manual.

HALSEY TAYLOR DRINKING FOUNTAINS

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Our complete line illustrated and described in Sweet's Architectural Edition.

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There has been a terrific slashing in all branches of the educational department. Supt. Wm. J. Bogan was asked to list all the auxiliary agencies so they could be scanned for reductions. The normal college, the vocational-guidance bureau, the compulsory-education bureau, evening schools, summer-vacation schools, visual education, free baths, dental clinics, penny lunches, Americanization classes, branch libraries, community centers, the bureau of safety, the bureau of child study, board of examiners, R.O.T.C. and the superintendent's immediate office force were all hit. Three district superintendencies were wiped out. Evening schools lost \$100,000 from their appropriation. The R.O.T.C. was abolished, but newspapers, the American Legion, and other friends of this training, waited on the board of education and demanded its return. The work was restored.

Superintendent Bogan resisted the educational-department cuts, but in vain. He pointed out that, if they were all eliminated, it would save only \$2,-000,000, and still leave a \$5,000,000 deficit, and in the meantime the school system would be wrecked. He prefers to run the schools at maximum efficiency as long as the money lasts, and then close down about November 1, if no other revenues have been received in the meantime. He further points out that, if a special session of the legislature should meet and provide additional funds to finance the schools, it will be too late unless the budget has provided for the various things to be financed.

Nevertheless, the finance committee, over the protest of Superintendent Bogan and President Caldwell, has made the cuts and is ready to present its budget to the full membership of the school board for adoption. Some board members have stated they will vote against any cut in the educational department.

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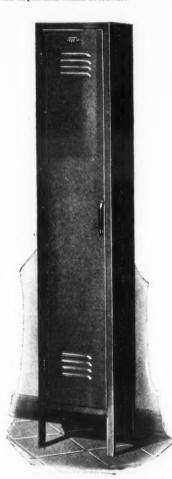
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Used Daily for Twenty Years -And Still Good

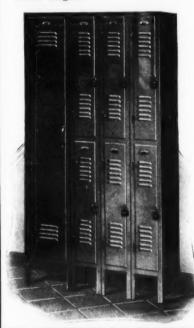
SINGLE-TIER LOCKERS

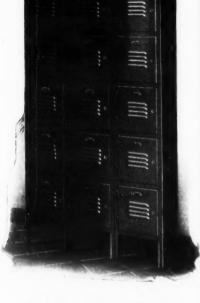
Extensively used in Schools, Colleges, Factories, etc., 2 heights—60" and 72". Ample room for coats to hang, without wrinkling. Hat shelf extends full depth and width of locker.



GYM LOCKERS

Furnished in units consisting of 1 full length Gymnasium Suit compartment, with respectively 6, 9 or 12 small private, individually padlocked lockers. 20" 24" and 30" heights.





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Especially adapted to Vocational, Manual Training, and Domestic Science Schools, Gymnasiums, etc. providing safe and private storage for personal effects in compact space.

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Familiarize yourself with the complete NORWEST Line. You will find therein a satisfactory type of Locker or Shelving for your every storage need.



Ask for Catalog, and, if you wish, the assistance of our competent storage engineers in planning your layout.



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Subsidiary of North Western Expanded Metal Co. 1264 Old Colony Building, CHICAGO

DOUBLE-TIER LOCKERS

Very desirable for Gymnasiums, Schools, Y. M. C. A.'s, etc., where many must be accommodated in small space. 2 heights—36" and 42".



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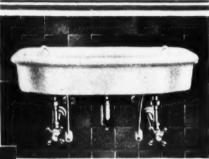
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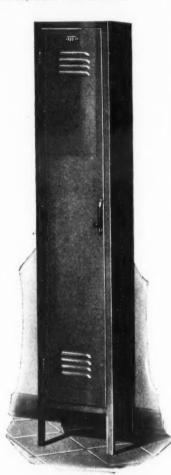
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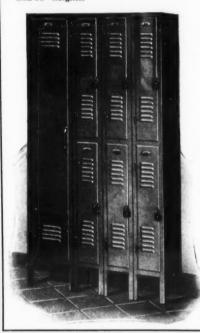
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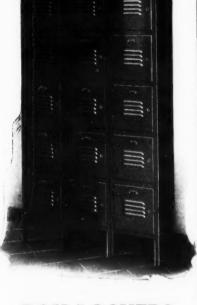
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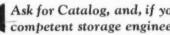
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The Science of School Shading is forging ahead—new types of shades have been created—new kinds of shade cloths have been made to fit every particular need.

Maxwell's Shade Service Bureau is a recognized leader in the School Shade Industry because it is supplying schools throughout the nation with proper shades.

We are now showing many new and modern features in

School Shades and the complete line will be on display at our Booth No. C-19 during the National Education Association Convention, Atlantic City, February 22nd to 27th.

Every Educator who attends this meeting owes it to his school and himself to visit this exhibit.



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MAXWELL'S SHADE SERVICE BUREAU

3636 IRON STREET

CHICAGO, ILL.

(Concluded from Page 120)

Year					Junior Instruction	C	eration
1924	 				\$104.54	s	15.76
1929	 			0	\$ 94.38	\$	18.35
					Senior	High	
Year					Instruction	Op	eration
1924					\$130.52	\$	13.87
1929					\$124.82	S	16.75

According to Dr. Henry's figures, the instruction costs increased only 17 per cent, while operation costs increased 75 per cent between 1924 and 1928. He emphasizes the fact that operation costs jumped 41.4 per cent in one year (1928), while instruction costs increased only 5.7 per cent in that same year. From his statistics, Dr. Henry implies that the allocation of school recovery to fine the contraction of school recovery.

From his statistics, Dr. Henry implies that the allocation of school revenues to fundamental service and to secondary service is out of line with country-wide norms, and he states that the reasons for the situation should be explained to the public and the teachers. Unlike most cities, the entire school system is not under the jurisdiction of the superintendent of schools in Chicago. The business department headed by the business manager, and the educational department headed by the superintendent of schools, are separate and independent of each other.

Forty-three persons were retired from active service in the Chicago schools on February 1, under the provisions of the 70-year retirement law. These were two district superintendents, two senior-high-school principals, three junior-high-school principals, eleven elementary-school principals, one junior college teacher, four senior-high-school teachers, seventeen elementary-school teachers, and three special teachers. These persons will receive an annuity of \$1,500 for life, if they have served in the Chicago schools at least twenty years prior to retirement. Besides the annuity, many, if not most of them, will also receive a pension from the teachers' pension fund. Of the 43 retiring educators, three have taught in Chicago for 52 years. Fifteen of them have taught 47 years or more in Chicago.

The median number of years' service in Chicago is

The December pay of the Chicago teaching force created a crisis. There was no cash to meet the payroll. Several days elapsed, and finally, on the afternoon before Christmas, the teachers were paid from building-fund resources — an extralegal procedure.

On the night of December 22 there was a terrific blizzard and snowstorm that nearly paralyzed transportation. Superintendent Bogan and President Caldwell decided that school show'd be dismissed on the 23rd, and word to that effect was communicated to pupils, teachers, and parents by radio broadcast from all stations in Chicago. Here is a "live" news item for California and Florida newspapers.

The annual Thanksgiving collection of funds for the School Children's Aid Society netted the organization \$75,000, the largest sum in its history. An average of sixteen cents per pupil in the Chicago public schools was collected. One school averaged 77 cents per pupil, and one school turned in \$1,700. The officers of the organization receive no salary. There is no overhead, because the headquarters are in one of the elementary schools with surplus rooms. The society provides clothing to needy children of school age, who would be unable to attend school for lack of clothes, unless they had this aid.

In the recent budgetmaking by the finance committee of the board of education, the question of abolition of the bureau of architecture was proposed. Instead of the present plan of developing school-building plans with its own employees, the board contemplated turning over its work to private architects. The finance committee reduced the bureau of architecture to less than half its previous personnel, dispensing with 86 men.

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—Kingman, Ariz. Teachers on the regular staff, who entered the school system with two years' experience, have been given increases of \$60, in addition to the regular annual increase, in order to give credit for one year of previous experience. New teachers entering the system are allowed \$60 for previous experience above the required two

A STUDY OF TEACHERS' SALARIES IN INDIANA

The Indiana State Education Department has compiled data on teachers' salaries, showing the median wage reported for the school year 1928–29. The classification is detailed as to the type of school and corporation. The salaries for the different teachers, supervisors, and principals are as follows:

Type of Teacher and of Corporation	Median	Number of Frequencies
Kindergarten:	272 ((25/27)	1 requences
Cities	\$1,492.10	263
Elementary:	distriction	200
Cities	1,479.06	5,807
Towns	1,093.58	553
Townships	967.00	7,509
Junior High Schools:		.,
Cities	1,690.25	901
Townships	1,221.21	98
High Schools:		
Cities	1,946.87	2,783
Towns	1,439.31	424
Townships	1,389.75	2,778
Elementary		
Principals:		
Cities	2,016.48	500
Towns	1,392.85	25
Junior-High-School		
Principals:		
Cities	1,720.00	48
High-School		
Principals:		
Cities	2,825.00	133
Towns	1,983.33	69
Principals—		
combined types:	4.04.7.44	
Townships	1,915.11	751
High School		
Vocational:	1 001 17	214
Cities	1,991.17 2,056.25	27
Towns	2,030.23	21
Cities	1,860.00	280
Towns	1,381.25	41
Supervisors:	1,001.23	-7.1
Cities	1,962.50	328
Towns	1,650.00	22
	-,000.00	20

It costs less to own a General Electric Commercial Refrigerator

... It Eliminates Food Wastage and Consumes Less Current

THE ultimate cost of refrigeration in any school lunch room is dependent upon the length of life of the equipment, the service required, the economy of the operation. That is why those who choose school lunch room equipment are investigating the merits of General Electric Commercial Refrigerators.

Because dirt and moisture cannot get into the motor or mechanism—due to the unique hermetically sealed unit design—a General Electric Commercial Refrigerator operates, with no attention—not even oiling—efficiently and economically.

Of the hundreds of thousands of owners of the household and commercial models, not one has paid a cent for service. This is an amazing record—assures uninterrupted, continuous, trouble-free service. A General Electric Refrigerator is most inexpensive to run.

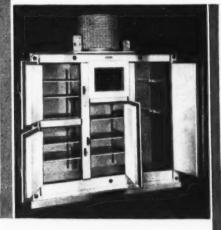
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The General Electric Commercial Refrigerator is distinguished by the unit—on the top, where it belongs for efficiency. On the top, the unit is out of the way, clean, quiet, operating economically. Schools, too, are vitally interested in the large storage space available in a General Electric Commercial Refrigerator. The shelves are adjustable to 2" variations. The gleaming white cabinet is sanitary, easy to keep clean.

It keeps milk and other perishable foods well below the 50° danger point. It teaches cleanliness, economy and efficiency.

Because of economy of operation—you save money in cold storage—and the reduction of food shrinkage and spoiling, a General Electric Commercial Refrigerator is a very worthwhile investment. Easy terms can be arranged, if you like.

The General Electric Refrigerator dealer in your community will gladly help you select the right model for your needs—or write today for our descriptive catalogue. Address Section CK-2, Electric Refrigeration Department of General Electric Co., Hanna Building, Cleveland, Ohio.



Note these superior advantages for Schools:

- Easy to install, because the cabinet and mechanism are combined as a single
- 2 Greater storage capacity, because the shelves are commodious and adjustable.
- 3 Operates without attention, the mechanism is simple, quiet, hermetically sealed—permanently oiled, trouble-free.
- 4 Maximum efficiency, since the cabinet and unit are scientifically built for each other, to coordinate with each other—assuring operating economy.
- 5 Reduced food shrinkage, self-defrosting evaporator minimizes dehydration.
- 6 Unqualified two-year guarantee.

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The case for electricity in your kitchen

The cost of institutional cooking has many factors. What you pay for equipment and for fuel can only be considered wisely when all factors are taken into account.

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Studies have recently been made in cafeteria kitchens, taking all these factors into account. The results point strongly to the superiority of electric cooking equipment. They merit your careful attention. Ask for a copy.

Westinghouse Commercial Electric Cooking Equipment has proved its worth in many prominent schools. The line is complete...from heavy-duty ranges, bake ovens and broilers to convenient short order equipment.

Send in the coupon today for information about electric cooking in school cafeterias.

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This Paper Towel has 73 times quicker

absorbency

41/2 times average strength, and linen-like softness, so that its standard of service and dollar-for-dollar value make it outstanding for school use.

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DETROIT

Standards for Playground Equipment

The Playground and Recreation Association of America has just received a report on standards for playground equipment, prepared by a committee of 17 recreation experts. The report represents the opinion of the majority of the committee members rather than a unanimous opinion with respect to certain of the types of apparatus recommended.

The committee in its study, took into consideration the provisions for the play outlet of children. In the selection of apparatus for a playground, it was thought advisable to include the types which serve the various outstanding play interests. Apparatus which had a biological appeal, and which provided fun as well as definite developmental possibilities was given favorable consideration.

Some of the factors which influenced the decision to include or omit a certain piece of apparatus on a given playground were the size of the area, the availability of trained leadership, the intensity of use, and the ages and interests of the children using it. Some types of apparatus, such as the slide, may be safely used with comparatively little supervision, whereas apparatus of the gymnastic type requires careful and expert supervision. Climatic conditions are a factor, and such riding apparatus as swings and the merry whirl are popular with children in the southern states.

Where limited funds make it possible to purchase only a few pieces, it was deemed advisable to select apparatus which accomodates the largest numbers. A slide offers greater service than a set of swings, although it does not accommodate as wide an age group. If the playground is to be used by school children in connection with a physical education program, more apparatus of gymnastic type such as the horizontal bar, flying rings, etc., well be introduced. The ages of the children who are to use the apparatus also have an influence in determining the selection of the apparatus. The slide, swings, and sand boxes appeal especially to the younger children, whereas such apparatus as the horizontal bar, gaint stride, and traveling rings are more popular with the older ones. Experience

has shown that apparatus which is of the best construction is most satisfactory and cheapest in the long run.

In order to select playground apparatus which would best serve its purpose, such factors as the following must be taken into consideration: Proper location, arrangement and erection, regular inspection, careful supervision, marking of apparatus zones, care of ground, and instruction in the correct use of the apparatus.

After a most careful study, the committee selected the following list of apparatus as the minimum standard for an average playground. The standard suggested is not intended to serve the special requirements of a physical-education program, but it will meet these needs in addition to providing apparatus of the playground or fun type. It will be necessary to adapt the standard to meet local conditions and special needs. The apparatus listed is intended to include the various types having the greatest value.

Minimum Standards for Apparatus

For preschool-age children Chair swings (set of 6) (under 6 years) Sand box (2 sections)

Sand box (2 sections)
Small Slide
Simple, low, climbing
device

For children of elementary school age (6-12 years and older)

Swings—frame 12 ft. high (set of 6)
Slide—8 ft. high, 16 ft. long
Horizontal ladder
Traveling rings or giant stride
Balance beam
Seesaws (set of 3-4)

Optional—if available Horizontal bar funds, space, and attend-Giant stride or traveling ance justify rings Low climbing device

In case boys and girls of school age are separated on the playground and separate apparatus is to be provided for each of the sexes, it is recommended

that the apparatus listed in the standards be installed for each group, except that the horizontal be omitted from the girls' section and the balance beam from the boys' section. When two sets of apparatus are to be provided for children of school age, one for all girls and for boys up to 10 years of age, the other for boys above 10 years, practically the same types should be provided as when all boys and girls are separated, except that the climbing device is omitted from the older boys' section.

The committee recommended that a pair of basketball backstops and volley-ball posts be considered as essential equipment for every playground. Equally important is the provision of a supply of game materials such as bats, balls, jacks, bean bags, horseshoes, and building blocks. Material for handcraft of various types should also be available. The committee stressed the necessity of adequate trained leadership and pointed out that this is more important than apparatus in maintaining a successful playground.

THREE KINDS OF SCHOOL SUPERVISORS

The research division of the National Education Association reports that school principals may be divided into three species, the snoopervisor, the pseudovisor, and the supervisor.

The snoopervisor, according to this report, is a principal who drops into the classrooms of his teachers for short irregular visits, counts the number of open windows, notes the neatness of the floor, smiles at the pupils, scowls at the teacher, and exits hurriedly with a mystical expression on his countenance.

The pseudovisor is a busy principal. He visits all classrooms hurriedly on a "get-into-every-room" a copy of his notes, and tells the teacher he expects improvement before his next visit.

The supervisor visits classes according to previously thought-out purposes. He observes often and long enough to form reliable judgments. He observes mainly teaching methods and pupil he-havior; not persons. He confers with the teacher at a time when she may ask questions and offer suggestions.

With scarcely any effort

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Personal Dews of School Officials

—The school board of Holyoke, Mass., has reorganized for the school year 1930–31, with a new board of nine members. Of the total membership, two, Mrs. Almira L. Cox and Mr. Joseph E. Lucey, are members at large, with terms expiring in 1931 and 1932. Seven other members, comprising Mr. Thomas J. Dean, Mr. Alfred F. Cousineau, Mr. August H. Baush, Mr. James J. Hannifin, Mr. James P. Boyce, Mr. John F. Moore, and Mr. William J. Powers are ward members, with terms expiring in 1931, 1932, and 1933. Mr. William R. Peck is secretary and superintendent of schools.

—MR. ARTHUR S. SOMERS, member of the New York City board of education, and chairman of the committee on finance and budgets, recently returned from a four months' tour of the Orient, during which he visited Australia and the Asiatic Continent. He commented upon the rapid strides which the Orientals are making educationally, saying that in virtually every place, he found the people eager for education.

—MR. WILLIAM J. SCHRODER, president of the board of education of Cincinnati, Ohio, has been reelected for the school year 1930-31. Mrs. Emma W. Fillmore was chosen vice-president, to succeed Dr. F. B. Dyer, who has resigned because of ill health.

—Rev. J. H. Waidelich has resigned as a member of the school board of Sellersville, Pa., after a service of eighteen years. Rev. Waidelich had completed his six-year term and had also served twelve terms a number of years ago.

—Mrs. A. Ross Read, 69, a member of the school board of Akron, Ohio, for eight years, died at a local hospital after a long illness. Mrs. Read

was first elected to the school board in 1917. She was reelected in 1921, but did not complete her four-year term.

—Mr. D. J. Bone, superintendent of schools at Lorain, Ohio, has been elected president of the Ohio Education Association, succeeding Mr. John F. Richeson.

—The school board of Fremont, Ohio, has reorganized for the year 1930, with the reelection of the old officers. Dr. B. O. Krellick was reelected as president; Mr. Norman Fulton as vice-president, and Mr. C. F. Walton as clerk.

—MR. L. U. Hulin has been reelected as president of the board of education at Youngstown, Ohio. Mr. Robert McGhie was elected vice-president, to succeed William Rowney. The new members of the board are Mr. Warren Williamson and Mr. W. C. Gubbins.

—The school board of Lima, Ohio, has been reorganized with the reelection of Mr. F. E. Mc-Clain as president. Mr. C. P. Neiswander was elected vice-president, and Mr. W. C. Derbyshire as clerk.

—MR. W. C. FISHER has been reelected as president of the school board of Lorain, Ohio. MR. E. G. Cooper was elected vice-president, and MR. ELI SMITH was reelected as clerk, with an increase in salary.

—MR. CLYDE SUTTON of Shadyside, Ohio, has been elected as president of the school board. Dr. E. D. Piper, a new member of the board, was elected as vice-president, and Waldo Carnahan as clerk of the board.

—MR. H. E. KOEHNLIEN has been reelected as president of the school board of Martin's Ferry, Ohio. MR. JOHN NEILLY was elected vice-president, and MR. H. H. REITHMILLER as clerk-treasurer.

—The school board of Toronto, Ohio, has reorganized for the school year, with the reelection of Mr. James Anderson as president; Mr. J. T. Hommel as vice-president; and Mr. H. H. Campbell as clerk-treasurer.

—Mr. Peter Nissen has retired as a member of the Benton township school board at Port Clin-

ton, Ohio, after a record of 36 years of continuous service. He was president of the board for 33 years.

—MR. R. L. McClave has been reelected as president of the school board of Steubenville, Ohio. Mr. Alec Smith has been reelected as clerk-treasurer, and Mr. J. L. Beatty as business manager.

—Mr. S. R. Creps has been reelected as school business director at Youngstown, Ohio. During Mr. Creps's period of service, the pay-as-you go plan was adopted.

—Mr. H. E. Cook has been reelected as president of the school board of Bucyrus, Ohio. Mr. B. F. Ruthruff as clerk. The new members are Dr. Frank P. Leonard and Mr. Harry A. Barrett.

—Mr. L. G. Tatman has been reelected as president of the school board of Struthers, Ohio, for the year 1930. Mr. C. C. Kesler was reelected as vice-president.

—DR. J. F. Steel has retired as a member of the school board of Lisbon, Ohio, after a service of fourteen years. The board has reorganized with the election of Mr. O. C. Caldwell as president, and Mr. C. M. Young as clerk. Other members of the board are Mr. C. E. Felton and Mr. Ralph O. Rogers.

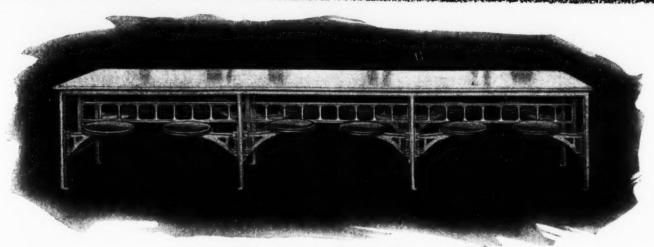
—The school board of Bellaire, Ohio, has reorganized with the reelection of Dr. J. O. Howells as president. Mr. Paul Miller was reelected as :e-president, and Mr. Walter Kilpatrick was named as clerk.

—Mr. Gustavus Ohlinger has been reelected as president of the school board of Toledo, Ohio. Mr. Robert Dunn was reelected as vice-president.

—Dr. J. L. Carter has been reelected as president of the school board of Fostoria, Ohio. Mr. A. L. Mann was reelected as vice-president, and Mr. William J. Daub as clerk-treasurer of the board. Mr. Daub succeeds Charles A. Gribble, who has resigned after completing sixteen years of service on the board. For twelve of the sixteen years he served as clerk of the board.

(Concluded on Page 128)

3 4 8



No. 314 Table, with swing seats attached

Sani Cafeteria Tables are made to serve—and survive

Any cafeteria table must serve, but only the fittest can survive. For the strenuous wear and tear of everyday use tests the mettle of no item of cafeteria furniture more thoroughly than a table.

Sani Cafeteria Tables are designed to serve and are built to survive. And they do. Installations in every part of the country, in cafeterias large and small, have proved beyond question that these sturdy, good-looking tables possess qualities that make for long service and at the same time provide maximum seating capacity in a minimum of floor space.

We furnish Sani Tables with tops of 3/4-inch flat-surface Sani Onyx, molded rubber or linoleum, and in convenient

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units seating two or more, either with or without swing seats. Our No. 314 Table shown above is made with black japan or white paint base, as desired. As no chairs are needed with this table, the floors can be kept clean without the necessity of moving chairs to clean under them. Our No. 313 Table, below, offers a third choice of white porcelain enameled base.

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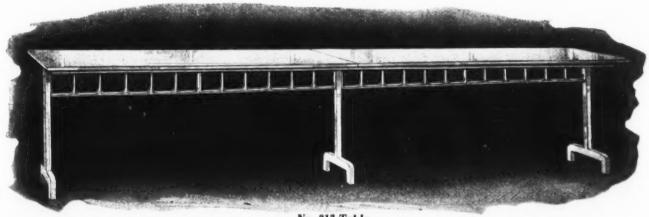


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Our 84-page catalog of Food and Drink Equipment, giving sizes, styles and prices on all of our lines, will be forwarded to you upon receipt of coupon filled out with your name and address. Mail this to us today.



North Chicago, Illinois



No. 313 Table

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SANI PRODUCTS CO., Sales Organization of ASBJ 2-30 Chicago Hardware Foundry Co., North Chicago, Ill. Gentlemen:—Please send your complete 84-page catalog of Food and Drink Equipment. I am particularly interested in

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"The Combination Cabinet Lock K-1 is exactly what I have been looking for." E. G. G.—Kans.

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-to obtain the best layout

for our enrollment?

-to secure equipment that will

give long service?

-that will operate efficiently

and economically?

—that will be best suited for

our type of menus?

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(Concluded from Page 126)

—Dr. Edward L. Smith has announced his retirement from the school board of Seattle, Wash., at the end of his present term. Dr. Smith, who is completing his ninth year of service, spent three years on the board from 1903 to 1906, and six years ago returned for two additional terms.

—MR. E. M. WILLIAMS has been reelected as president of the school board at Cleveland, Ohio. Mr. James R. Mills was elected as vice-president, and Mrs. Mary Martin was named on the committee on educational matters.

—Mr. Joseph M. Kunkle has been appointed a member of the school board of Johnstown, Pa., to succeed Dr. F. M. B. Schramm.

—MR. CARL W. EURTON, of Indianapolis, Ind., has resigned as superintendent of school buildings and grounds. Mr. Eurton was appointed to the position more than a year ago, and had been connected with the department for the past ten years.

with the department for the past ten years.

—MR. FRED KEPNER and MR. LEWIS E. WHITEMAN, are the only members of the old Indianapolis
school board, with the reorganization of the board
in January, 1930. The terms of Mrs. Lillian Sedgwick, Mr. Charles Kern, and Mr. T. F. Vonnegut
expired on December 31. All of the present members, with the exception of Mr. Vonnegut, were
defeated at the last election by the five members
of the citizens' school ticket.

—MR. DENTON MASON, who was recently reelected as mayor at McClure, Ohio, was also returned to the local board of education. Mr. Mason has served on the board for 16 consecutive years, and has been clerk of the board for 8 years.

and has been clerk of the board for 8 years.

—MR. WASHINGTON C. BAILIE, a member of the school board of Whitemarsh, Pa., for 35 years, died at his home at the age of 76. Mr. Bailie, who had filled the office of treasurer for 11 years, retired from the board in 1927.

—The school board of Cincinnati, at its reorganization meeting on January 6, welcomed some new members. It was the first meeting for Mr. Chase M. Davis and Mr. Standish Meacham, who were elected in November. Mr. John B. Hollister, who severed his connection with the schools at the close of 1929, retires after a long service on the board.

—MR. WALTER NIELSEN is the new member of the school board at Lorain, Ohio, succeeding Mrs. Elizabeth Williams, who resigned after a service of eight years on the board. Other members of the board are Mr. A. E. CAMERON, Mr. D. W. LAWRENCE, Mr. W. S. FISHER, and Mr. E. G. COOPER.

—MRS. H. H. MARTIN, MR. PHIL BRADFORD, and MR. P. P. BAUGHMAN are the three new members of the school board at Columbus, Ohio, who succeed Mr. Stewart Hoover, Miss Juliette Sessons, and Mr. Erdis Robinson.

MRS. WALTER GRAY has retired from the school board of Memphis, Tenn., after a service of 12 years. Mrs. Gray was the first woman to serve on a Memphis school board, and the second woman elected to a school board in Tennessee.
 MR. K. W. DAVIDSON has been elected clerk of

—Mr. K. W. Davidson has been elected clerk of the school board of District No. 4, Kingman, Ariz. Mr. W. P. Turner has been reelected to the highschool board.

—Mr. H. F. OSLER has been appointed superintendent of school buildings and grounds at Indianapolis, Ind., succeeding Mr. C. F. Eurton.

—MR. EVERETT M. Hosman has been reelected executive secretary of the Nebraska Teachers' Association for a ninth year, at an annual salary of \$5,750.

—Supt. C. Ray Gates, of Grand Island, Nebr., has been unanimously reelected for a fourth term of three years, at an annual salary of \$6,000.

—MR. G. H. SANBERG, superintendent of schools at Rochester, Minn., for the past five years, has been reelected for a sixth term and his salary raised to \$6,000. Mr. Sanberg has been reelected for a second term as president of the Minnesota Education Association.

—HAROLD G. CAMPBELL and CHARLES W. LYON have been unanimously reelected associate superintendents of the New York City schools by the board of education.

—MR. NORMAN STORMONT and MR. LOUIS WEIŞ-BECKER have taken their places as new members of the school board of La Crosse, Wis.

—The appeal of the attendance staff of New York City for salaries equal to those paid visiting teachers, has been dismissed by Commissioner of

Education Frank P. Graves, because the attendance officers under the law are "truant officers" and are in no sense teachers. Attendance officers now receive \$1,800 to \$3,000 a year. Had they won their case, they would have received \$2,040 to \$3,830.

MR. COLE OF SEATTLE JOINS FACULTY OF UNIVERSITY OF WASHINGTON

Mr. Thomas R. Cole, superintendent of schools of Seattle, Wash., has announced his retirement from the Seattle school system on August 1 next, to become a member of the faculty of the University of Washington. Mr. Cole's work at the University will consist largely of extending the services of the educational department of the University to the schools of the state. The position, newly created, is intended to meet the growing demand for a better understanding by the School of Education of the problems confronting the superintendents and members of boards of education. He will divide his time between the study of problems in the field and the teaching of classes in the department of school administration of the University.

Mr. Cole leaves the Seattle school after a most successful period of educational service. He was recently offered a renewal of his contract for three years, at an increase in salary, but preferred to accept a position which gives him greater opportunity for professional study and service. During the past four years, Mr. Cole has divided his time between the University of Chicago and the University of Oregon as special instructor in school-administration problems.

MR. ITTNER OFFERS EXHIBITS

Mr. William B. Ittner, architect, of St. Louis, Mo., has announced that his exhibit of school buildings, exteriors and interiors, compiled during the past five years, is now available as a traveling exhibit for educational conventions, clubs, parent-teacher associations, and other groups interested in the promotion of good schoolhouse planning and construction. A field representative accompanies the exhibit and attends to all the details in connection with the arrangement, packing, and shipping of the exhibit.



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2500 rooms 2500 baths opened to the public, January 1930

LOW OPERATING COST" explains the six VULCAN-equipped kitchens at the New Yorker

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The NEW YORKER

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Standard Gas Equipment Co., 18 East 41st Street, New York City.

Because of my experience with Vulcan equipment, especially at the Hotel Gibson, I am glad that it is being used in The New Yorker.

I am naturally enthusiastic about Vulcan ranges because of their low operating cost, while Pierre Berard, our Chef de Cuisine, is equally enthusiastic because of their speed in operation, ease of handling and perfect heat control.

very truly, of alpl Wil ging Director

duty gas ranges, 14 No. 3756 Vulcan broilers, 15 Vulcan Salamander broilers, 5 No. 3764 Vulcan insulated deep fat fryers. Three of the six kitchens are equipped with Monel Metal throughout. This large Vulcan installation was made by the John Van

are equipped with 42 All-Hot-Top Vulcan heavy

THE KITCHENS of the New Yorker

Range Company.

Hotel Department: Standard Gas Equipment Corp., 18 East 41st Street, New York

If you are interested in cutting your cooking costs ask for further information.





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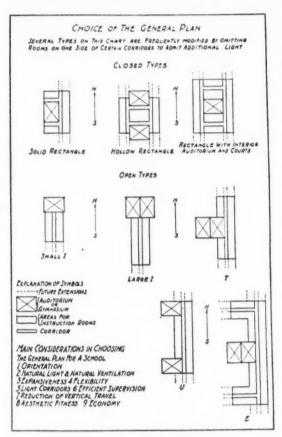
ARCHITECTURAL DESIGNS, PLANS, AND SPECIFICATIONS

6. What Type of Building Shall be Erected?

a) Shall it be of the closed type?

Shall it be of the open type? What are the merits and demerits of each

type? The following chart taken from the report of the N.E.A. Committee on Schoolhouse Planning, suggests three modifications of the closed type: (1) the solid rectangle, (2) the hollow rectangle, (3) the rectangle with an interior auditorium or gymnasium, and two courts. It suggests five modifications of the open type of building which are best designated by the letters I, T, U, E, and H.



TYPICAL SCHOOL-BUILDING PLANS (Courtesy N. E. A.)

The main considerations in determining the plan of a building are (a) the orientation, (b)the natural light and ventilation of the rooms used for instructional purposes, (c) possible enlargement without modification of existing parts, (d) flexibility, or adaptability to changing uses, (e) easy circulation dependent upon lighted corridors and well-placed stairways, (f) effective supervision, (g) aesthetic fitness, and (h) economy.

The superintendent should visit and make a thorough study of the site: its size, shape, surroundings, points of compass, etc. Unless the superintendent is familiar with the different types of buildings, he cannot intelligently designate the most practical type to go on a given site, as the size and shape of the site may seriously affect the type of building that can be

In most instances the orientation of the building will decide its location on the site. So, less the superintendent is familiar with the different types of buildings and the site, he cannot intelligently select the most practical type of building, or decide its location on the site.

The open type of building affords the greatest flexibility in the arrangement and proper location of the rooms. This becomes an extremely

important matter when the orientation of certain rooms is under consideration. Thus for drawing, art, and sewing rooms, a north light or northerly exposure is the best, because it gives the soft, modulated light needed for this kind of work.

East and west light is best for academic rooms, because the light and heat is modulated. Rooms with southerly exposure become unbearably hot, and the light is too intense, especially in the middle periods of the day.

A south, east, or southeast exposure for science rooms is best in order to get direct sunlight for plant growing and light experiments.

Conservatories are failures when exposed to north light. Conversely, drawing, art, and sewing rooms are never satisfactory when subjected to south exposure.

The question of light being of such paramount importance, it follows that the cafeteria should be located on the top floor of the school, where it occupies the best lighted space in the building; especially a cafeteria which is used only one or two periods a day, and not requiring any sight work, thus crowding out instructional rooms which should have the best light possible.

7. How Shall the Dimensions of Classrooms and All Other Rooms be Determined?

Architects should not be held responsible for room dimensions. This responsibility should be placed exclusively upon the superintendent.

In preparing educational specifications for a new school building, the superintendent should specify in detail the different activities that are to be housed in the building, the number of pupils per room, the amount and kind of furniture and equipment for each room, the location of each room, and its furniture and equipment.

In order to ascertain the proper dimensions of each room in the new building, either of the following procedures should be followed:

a) A room in an existing building should be selected by the superintendent, and equipped just as he contemplates equipping a given room in the new building. This will enable him to actually visualize the various rooms, and to definitely specify length, width, and height of each room, and the location of the furniture and equipment.

b) If (a) cannot be done, the superintendent should require the architect to make scale drawings showing the layout of each room, with location of all desks, furniture, and equipment, aisle widths, radiators, etc. The superintendent should have before him, whenever possible, pictures and photographs of the furniture and equipment which the rooms will contain when completed. A study of these drawings will enable him to specify room dimensions which will provide suitable working space for teachers and pupils.

8. Location of Rooms.

Care must be taken to locate manual-training rooms, gymnasiums, and all rooms that are of larger dimensions than classrooms, in such a way that unusual or expensive construction shall not be involved. If gymnasiums and auditoriums are located so they must carry rooms above them, the walls and ceiling construction must be made much more costly than would be necessary if the walls of these rooms carry roof only.

The interrelation of the various rooms must also be considered. The product of the domesticscience cooking rooms is often utilized in the lunchroom. For this reason, it is important that these rooms be located adjacent, or near each other, and convenient for intercommunication.

Mechanical-drawing rooms should not be widely separated from the industrial shops

9. What Width of Corridors Shall be Used? The superintendent is the one who should determine the minimum width of corridor, below which it would not be advisable to go, in order to provide proper circulation facilities for the pupils when using the corridors. The problem becomes one in which a decision must be reached as to how much wider the corridors shall be than the irreducible minimum established by state or city laws and ordinances.

Schoolhouses have been built with corridors 8 ft. wide, 10 ft. wide, 12 ft. wide, and up to 16 ft. and 18 ft. wide. What, then, will be the economic value of a saving of 1 ft. in width of corridor?

Using the same identical building as is indicated under Item 9, every reduction of 1 ft. in the width of the corridor will save \$2,880 based upon a reduction in cubical content figured as follows:

2 ft. in total width (1 ft. for each corridor)

160 ft. approximate length of building 30 ft. approximate height of building

30c per cubic foot assumed cost of construction 2 ft. \times 160 \times 30 \times 30c equals \$2,880, or a saving of \$9 per lineal foot of building, figured as follows: Strip 1 ft. wide \times 1 ft. thick \times 30 ft. high \times 30c

equals \$9. (Continued in March)

CONTRACTING FOR SCHOOL-HOUSE EQUIPMENT

The article which appeared in the December number of the SCHOOL BOARD JOURNAL under the above title, has created some interest among those who deal with public authorities in the sale and installation of equipment. Mr. Fred H. Halsey, of the firm of Witt, Seibert and Halsey, architects of Texarkana, Arkansas-Texas, expresses the opinion that there is no known method of eliminating all the difficulties in spending school money. He lays the causes to the following:

"1. The wide variance in quality and prices of different products professing to perform the same function.

"2. The entirely natural friendship of some school-board member for some contractor or salesman which, coupled with the fact that the board member cannot appreciate the technical properties of the product in question and fails to realize that oftentimes the best salesman from the standpoint of business and personal character, does not represent the advisable product for that occasion.

"3. The perfectly proper desire of all men to make a success of their business and their varying ideals as to what is proper competition. "4. Sinister interests which may or may not

be present." Mr. Halsey adds, however, that after many years of experience he has evolved a method which eliminated most of the trouble. He presents his method in the following language:

"1. Our plans and specifications are complete and definite, naming manufacturer, giving address and catalog number and size where necessary.

"2. Our specifications carry a clause as follows: 'MATERIALS: All trade names, names of products or names of manufacturers used in these specifications are used to establish the nature and quality of the material required. The contractor must submit a bid covering the work as shown and specified. The contractor will be permitted to substitute for the materials so named, and similar material of equal value and merit in the opinion of the architect; provided, that a written request for permission to make such substitution shall be filed by the contractor with the architect within twenty days after the signing of the contract, and the architect approved the substitution in writing, otherwise the materials specified will be required.'

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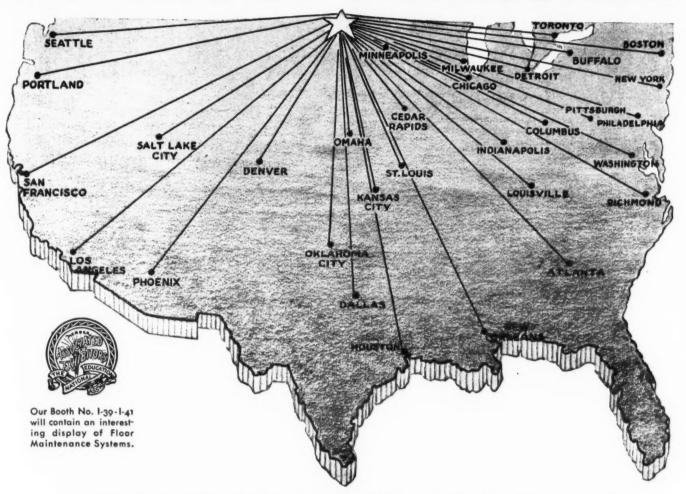
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ACAR-NA-VAR MAN operates from each city shown on the map. The proximity of these Service or Warehouse Branches will enable you to secure almost instant contact either for supplies or floor problem information. We suggest that you get in touch with the CAR-NA-VAR MAN—the one nearest you. He will gladly tell you the complete story of this superior floor treatment which COMBINES varnish and wax. The continued use of CAR-NA-VAR will materially reduce your yearly floor maintenance budget.

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Are they safe from traffic dangers?

With traffic conditions becoming more hazardous, school board officials cannot afford to ignore the increased responsibility for children's safety.

The modern idea of maximum safety is to enclose playgrounds with Cyclone Fence. Throughout America, this dependable fence is keeping thousands of children within bounds, out of dangerous streets, and saving many lives.

Cyclone Fence is made of durable copper-steel. Fabric galvanized by the "Galv-after" process developed by Cyclone. All parts heavily galvanized. Cyclone Fence lasts for many years without upkeep expense. Erected on H-column posts for greater strength and durability.

Our own trained erection crews install Cyclone Fence everywhere. Prompt service no matter where your school is located. We also make woven wire window guards, sectional partitions, tennis

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General Offices: Waukegan, Ill.

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A LAWN BUILDER

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There is no better mower for medium-largesized grass areas than the Ideal "Thirty" Roller type. It smooths the bumps and hollows as it cuts.

There is plenty of power, and control is easy by means of two levers at the handles. The "Thirty" cuts close to walls and walks—maneuvers easily around trees and bushes.

For private lawns, schools, and public parks, Ideal Power Mowers insure smooth, close-cut grass, and well-conditioned sod.

The world's most complete line of power grass cutting equipment, including power mowers in three sizes (roller type, wheel type and Triplex). Send today for illustrated catalog.

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Wherever noise is a problem Irving Hamlin Hamlin Sound-Mfrs. of Sound-Proof Doors and Folding Partitions proof, jamb-tight doors and folding partitions are a sim-Street ple remedy.



Exhibit of School Buildings

N. E. A. — ATLANTIC CITY February 20-26, 1930 Booth K-7

Plans and photographs of new school buildings and their new developments at:

> New Britain, Connecticut East Orange, New Jersey Mount Vernon, New York Stoughton, Massachusetts Marshall, Michigan Hillsdale, Michigan East Detroit, Michigan East Chicago, Indiana Naperville, Illinois Evanston, Illinois Grand Haven, Michigan

as well as illustrations and plans of new buildings in other cities will be available for inspection and study by superintendents and principals. Every school administrator becomes, sooner or later, a student of school buildings. This exhibit affords a valuable opportunity for suggestion

WARREN S. HOLMES COMPANY

Architects

Lansing, Mich. Boston

Chicago

(Concluded from Page 130)

"This clause allows us and the owner to refuse to consider any product until the contractor is thoroughly sold on it. This eliminates all those whose product the contractor doesn't want to buy and which he will not back up with his maintenance guarantee. The saving in time and energy is surprising.

"3. Our specifications carry a clause as follows: 'The contractors to whom the owner is considering the awarding of the contract shall, upon demand, submit to the architects, in writing, a list of the subcontractors whom he expects to employ and the parties from whom he expects to purchase any material which is completely or partially worked before delivery to the site, together with the correct amounts of the various contracts, orders, etc., with the party designated whom he expects to employ. The owner may require the change of any selection by adding to or deducting from the base bid, the net difference between the prices at any time up to twenty days after the signing of the agreement.'

"This clause allows us to ascertain the intentions of the contractor in regard to items which can be obtained from various sources and provides for the necessary financial adjustments dependent upon the changes.

"If this plan is thoroughly understood," says Mr. Halsey, "by both the board of education and the architect before any plans and specifications are released to bidders and they agree to and do abide by it, everyone will get a fair deal without undue loss of time or of confidence in other parties interested.

By A. C. Monahan, Formerly U. S. Bureau of Education

District of Columbia Expenditures for Education A study of expenditures for all purposes, by the District of Columbia, covering a period of five years shows that, during that period, a total of \$166,963,104 was spent. Of this amount, approximately \$55,598,714 was spent for schools. This is 33.3 per cent of the total. Divided among the principal items, the figures are as follows: Education, 33.3 per cent; protection of life and property 16.7 33.3 per cent; protection of life and property, 16.7 per cent; highways, 12.4 per cent; public welfare, 11.9 per cent; health and sanitation, 9.7 per cent; recreation, 6.4 per cent; general government (overhead), 4.7 per cent; public service enterprises, 4.3 per cent; miscellaneous four tenths of 1 per cent; and interest on debt, two tenths of 1 per cent.

Distributing these percentages over the various years, it is seen that the percentage of expense for education has arisen steadily, the percentages being 31.9, 32.8, 33.0, 33.7, and 34.2. The figures given for education include libraries and all educational purposes. The percentage for libraries, however, is in no year as great as one tenth of 1 per cent. From these figures, it would seem that the contention of the board of education that it should be allotted one third of the money available for public uses, has been met. The figures are even more favorable, if the gasoline tax is not taken into consideration. This money could not, under the law, be allotted for schools or any other purpose, aside from the building and repair of roads and streets. With this eliminated, education in the last five years has received 34.3 per cent, instead of 33.3 per cent of the appropriations.

Resignation of Isaac Gans from the Washington School Board

Mr. Isaac Gans, a prominent merchant in the District, has just resigned from the school board because of the unusual responsibilities thrust upon the school-board members, due to the peculiar situ-

ation in the District regarding its school system under a district government and dependent upon Congress for appropriations and authority. It means much time upon the part of the members of the board not required in an ordinary city. In his let-ter of resignation dated January 2, Mr. Gans, who had been chairman of the School Board's finance committee since his appointment in February, 1927, characterized the work of the school board as "important and responsible," and paid tribute to his fellow members and to the school's officers.

He says, "After careful consideration, I have come to the conclusion that it is necessary for me to resign from the school board on account of the many duties that I have to perform, and that I am not able to give this responsible and important work the consideration it should have."

Mr. Gans's resignation calls attention to the peculiar fact in the district system, that the schoolboard members are selected and appointed by a body that has no other function relative to the school system. The members of the Supreme Court themselves are appointed by the President of the United States.

For many years various organizations have attempted to change this system of appointments of the school board, desiring particularly to find some method which would leave the board more responsible in its actions to the residents of the District. Appointment by the district commissioners has been suggested and the suggestion has received some support. Election by the citizens of the district has been proposed in several bills introduced into Congress. The outcome is problematic as the people of the District have no way of expressing their wishes, except through various citizen group meetings which are relatively ineffectual.

The Secondary School Survey Leonard V. Koos and Mr. E reported in Washington for work with the National Survey of Secondary Education, now in progress under the direction of the United States Office of

Education.

Dr. Koos holds the position of professor of secondary education at the University of Chicago, from which he secured a leave of absence to assume the position of associate director of the survey.

-The voters of Vista, Calif., have approved a bond issue of \$50,000 for a grammar school. Mr. John S. Siebert, San Diego, has been chosen to have charge of the erection of the building.

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Now for the first time the height of the stream of water coming from a drinking fountain is held to a constant height without wasting one drop of water. Fluctuating water pressure has been conquered . . and permanently so . . because of the Century equalizing piston, the solid, all-bronze construction of which assures long-time service without repair.

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The Century Automatic Stream Control
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AND provides it quickly, conveniently and economically. Quickly because a cafeteria by Dougherty is especially designed to handle rush lunch periods, through speedy preparation and service.

Conveniently because of the planning and thought that goes into every detail of a cafeteria installation by this house. The keynote of the Dougherty cafeteria is convenience.

Economically because of the savings effected through modern manufacturing methods. Methods that give advantages to the school in the form of lowered initial cost, lowered operating cost and lowered maintenance cost. Let us aid you in the planning of a cafeteria for your

On your trip to Atlantic City in February, stop at Philadelphia and visit our showrooms.

Everything For The Kitchen PHILADELPHIA, PA.

Mr. Lide has been appointed specialist in curricula and allied fields. He has held administrative positions as principal and superintendent of schools in various cities of Arkansas and Oklahoma. During the school year 1928–29, Mr. Lide directed the work of curriculum revision conducted by the school systems of the cities in Arkansas, under the direction of the University of Arkansas.

James A. Bond, Dean of the Kentucky Normal

James A. Bond, Dean of the Kentucky Normal Institute of Kentucky, has been appointed specialist in Negro education. His work will be a part of the survey of secondary education being made by the Federal Office. Dean Bond has been engaged in educational activities in behalf of his race for 15 years, in Kentucky, Tennessee, and Georgia. Commissioner Wm. J. Cooper has assigned vari-

Commissioner Wm. J. Cooper has assigned various members of the regular staff of the Office of Education to work on the survey. The actual workers will be assigned by three advisory committees. The first to be appointed is the "consulting committee" of nine experts appointed last October. It has met, organized, and defined the field of work. An "advisory committee" of 30 educators has been appointed. In the near future a third group, consisting entirely of laymen, will be named. To it will go the findings of the survey, which they will criticize from the standpoint of the average citizen.

The personnel of the advisory committee of educators represents a large variety of educational interests in all parts of the country. On it are specialists in school administration, state, city, rural, and higher education. Also there are representatives of elementary schools, secondary schools, junior high schools, senior high schools, junior colleges, senior colleges, Negro education, private schools, and school libraries. Its members are:

school libraries. Its members are:

E. J. Ashbaugh, dean, School of Education, Miami University, Oxford, Ohio; John L. Clifton, state director of education, Columbus, Ohio; R. L. Cooley, director, Milwaukee Vocational School, Milwaukee, Wis.; Philip W. L. Cox, professor of secondary education, New York University, New York; Jesse B. Davis, professor of secondary education, Boston University, Boston, Mass.; J. D. Elliff, high-school visitor, University of Missouri, Columbia, Mo.; Lucile Fargo, East Cleveland, Ohio; E. N. Ferriss, professor of secondary education, Cornell University, Ithaca, N. Y.; Will C. French, associate superintendent of schools, Tulsa,

Okla.; John M. Gandy, president, Virginia Normal and Industrial Institute, Petersburg, Va.; T. W. Gosling, superintendent of schools, Akron, Ohio; Arthur Gould, assistant superintendent of schools, Los Angeles, Calif.; E. D. Grizzell, professor of secondary education, University of Pennsylvania, Philadelphia, Pa.; W. W. Haggard, superintendent, Joliet Township High School and Junior College, Joliet, Ill.; W. A. Jessup, president, University of Iowa, Iowa City, Iowa; Franklin W. Johnson, president, Colby College, Waterville, Me.; J. Stevens Kadesch, head master, Medford High School, Medford, Mass.; Frank M. Leavitt, associate superintendent of schools, Pittsburgh, Pa.; Michael H. Lucey, principal, Julia Richman High School, New York, N. Y.; A. Laura McGregor, vice principal, Washington Junior High School, Rochester, N. Y.; C. R. Maxwell, dean, school of education, University of Wyoming, Laramie, Wy.; Bruce Millikin, principal, East High School, Salt Lake City, Utah; Shelton Phelps, director of instruction, George Peabody College for Teachers, Nashville, Tenn.; E. Ruth Pyrtle, Bancroft High School, Lincoln, Nebr.; Lewis W. Smith, superintendent of schools, Berkeley, Calif.; W. R. Smithey, professor of secondary education, University of Virginia, University, Va.; Sarah M. Sturtevant, associate professor of education, Teachers College, Columbia University, New York, N. Y.; Milo H. Stuart, principal, Arsenal Technical High School, Indianapolis, Ind.; W. L. Uhl, dean, college of education, University of Washington, Seattle, Wash.; and Wm. A. Wetzel, principal, senior high school, Trenton, N. J.

Education by Radio
The advisory committee on education by radio, appointed last June by Secretary Wilbur, of the Department of the Interior, has completed its work covering the use of radio in its application to education. Its measure of the possibilities are so promising that the department is preparing to lend every possible aid. One of the broadcasting chains will give two half-hours a week to the cause of educa-

tion, and the secretary and the commissioner of

education have offered every assistance.

The committee uses the term "education" in its broadest sense. Without prejudging the conclusions later to be drawn, the committee felt that its search for facts and possibilities should include not only formal educational broadcasting for children and adults, but also material of general instructive and informative purpose, occasional or informal in organization and presentation, for children and adults.

By this open-door policy, the committee has sought to show hospitality toward any experiments sincerely intended for educational significance, as distinct from broadcasts intended primarily for entertainment.

The establishment of a Radio University for National Education provoked a heated discussion, but was not approved for the present. The suggestion was made by one of its subcommittees, which proposed that an endowment of \$10,000,000 be obtained, the income of which should be sufficient to carry the undertaking through its experimental years.

The board of control, it was urged, should incorporate the Radio University of National Educations as a nonprofit-sharing educational institution. The board would appoint an administrative staff of a general director, and 48 state directors. The field of knowledge to be experimentally cultivated should be that agreed upon by state and national directors, with the state departments of instruction and, in the case of adult education, with the advice of the extension departments of the various states and universities.

In lieu of the suggested Radio University, representatives of the Columbia Broadcasting System proposed the establishment of a division of education by radio in the U. S. Office of Education. They urged that this division provide for elementary education on the one hand, and advanced and adult education on the other. They urged that the director of this division name a technical staff which would arrange programs and provide for their distribution over existing systems.

—Eau Claire, Wis. An expansion program, calling for the construction of a \$325,000 junior high school, has been presented to the board of education by Supt. Paul G. W. Keller. The new building, which will be needed by 1931, will take care of the normal increase in enrollment and the proposed expansion of the school system. Superintendent Keller reports that the present enrollment in the junior and senior high schools has reached 1,962, and that the normal increase in enrollment will see the present buildings taxed beyond their capacity by the end of 1931.

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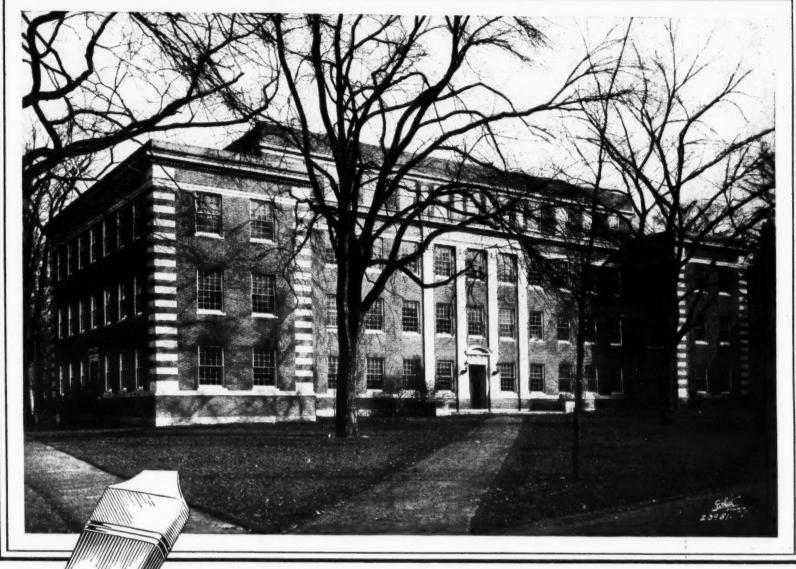
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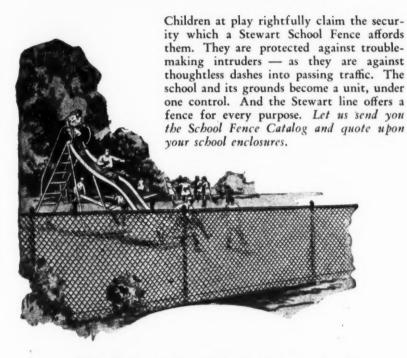
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PASSING OF DR. DRESSLAR

Dr. Fletcher Bascom Dresslar, professor of school hygiene at Peabody College, Nashville, Tenn., died at his home in that city on Saturday, January 18, after a brief illness. Dr. Dresslar was 71 at the time of his death.

71 at the time of his death.

Dr. Dresslar was born in Indiana, in September, 1858, where he received his common-school education. He was graduated from Indiana University and from Clark University at Worcester, Mass. He began his career as a country-school teacher, later becoming instructor in the high schools of his native state. In 1894 he went to Los Angeles, where he became an instructor in the normal school. Later he became associate professor of science and the art of teaching at the University of California. He was also professor of education at the University of Alabama from 1909 to 1911. From 1911 to 1912 he was specialist in school hygiene for the U. S. Office of Education, and on December 1, 1912, he accepted the position of professor of school hygiene at Peabody College.

As the leader in the best thought on the problems of school architecture, school sanitation, and health of school children, Dr. Dresslar became known throughout the United States and other countries through his books and articles published in the educational periodicals. Among his bestknown publications are "American Schoolhouses and Grounds," "School Hygiene," "Rural Schoolhouses and Grounds," and "Open Air Schools." He was the outstanding leader for better school buildings in the southern states, through his work at Peabody College and the Rosenwald Foundation.

DEATH OF JOHN GILL

Announcement has been made of the death of Mr. John Gill, secretary of the J. K. Gill Company, school-supply jobbers, which occurred on December 28, at Portland, Oreg.

SCHOOL ADMINISTRATION NOTES

—A bronze tablet to the memory of Mr. Herbert Burnham Davis, formerly principal of the Henry Frick Training School for Teachers, was dedicated recently by the alumnae association at Pittsburgh. The principal address was made by Rev. C. Wallace Petty.

—New York, N. Y. To conserve teachers' health, and to insure the highest type of service in the regular day schools of the city, the local board of examiners has adopted a regulation, requiring teachers who seek to serve in the evening or summer schools to present evidence of their physical fitness. Under the new rule, it is required that the applicant's day-school principal shall testify to the teacher's physical fitness. A special application blank has been prepared containing the statement which must be signed by the principal.

In the past, teachers were permitted to serve in the summer and in the evening schools if they held day-school licenses corresponding to the license required for the auxiliary service. In some cases, the health of teachers became impaired by additional classroom service, and as a result, their work in both the regular and extra positions suffered.

—Rochester, N. Y. The city council has approved a bond issue of \$1,700,000 for new schools during the year 1930-31. In addition to a high school to cost \$1,500,000, the school board will build additions to two schools, erect an elementary school, and remodel other existing buildings.

—A feature of the Department of Superintendence program at Atlantic City will be radio broadcasting, which has been introduced to carry some of the high spots of the meeting to those not able to attend. The schedule provides for three radio programs on eastern standard time.

—A state-aid school commission has been appointed in Indiana, to devise ways and means of relieving the poorer school districts now in financial distress. It is held that the total deficit of the several school districts exceeds the sum of \$1,000,000. Among the proposals offered is one which calls for an additional statewide tax to be employed as an equalization fund.

—The First International Congress on Mental Hygiene will hold its meeting May 5-10, 1930, at Washington, D. C.

—A total of 240 high-school teachers have been appointed, and 114 others have been transferred by the board of education of New York City with the reorganization of the high-school personnel of the

city at the opening of the new term in February. Included in the new appointments and transfers was the teaching staff of the new Samuel Tilden High School, Brooklyn, which was opened in February. The high-school appointments became effective on February 3, and the transfers on February 1.

—The National Society of College Teachers of Education will hold their annual meeting February 24 to 26, at Atlantic City, N. J. The headquarters will be in the Hotel Chalfonte-Haddon Hall, and the meetings will be in the rooms of the hotel, and in the Atlantic City Auditorium.

—Considerable impetus has been given in the past three years to the use of motion-picture films in education and advertising, according to Mr. E. J. Way, of the motion-picture section of the Department of Commerce. At present there are more than 375 firms in the country using or producing and distributing nontheatrical films, either for advertising or for use in institutions of learning.

The U. S. Bureau of Foreign and Domestic Commerce recently called a conference of leading industrial and educational motion-picture producers and distributors, to discuss problems of the industry, including advertising, sales efforts, and sound pictures. Motion pictures are being utilized as a means of study by grade schools, high schools, colleges, and universities.

—Rockford, Ill. The school board has adopted a budget for the school year 1930-31, amounting to \$1,859,550. Of the total budget, \$100,000 will be used for the payment of salary increases to teachers.

—Canton, Ohio. The cost of operating the schools during the school year 1930-31 will amount to approximately \$2,815,669, according to Mr. J. F. Roos, clerk of the board. The budget includes an increase of \$80,000 for teachers' salaries.

—Supt. Paul G. W. Keller, of Eau Claire, Wis., has presented a recommendation to the school board, calling for the erection of a junior high school in 1931, to house approximately 800 students. Mr. Keller pointed out that the school population is increasing at the rate of one new eightroom building a year.

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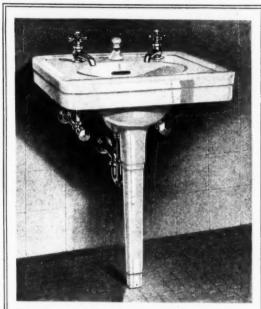
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Plan as elaborate a washroom as you will—employ the finest sanitary engineer to lay it out—let the best plumbing contractor install it . . . unless your piping materials are thoroughly dependable, your efforts are unavailing.

For it is behind the wall and under the floor that the real value of a plumbing installation is determined. Unless the fittings are proof against leaks, unless the valves perform their duties unerringly, sanitation is endangered, maintenance is increased, and an expensive repair job is threatened.

Realizing this, Crane Co. has built its



To the inviting appearance and mechanical perfection of this Ipswich lawatory, C598-88, the certainty of dependable operation is added when it is installed with Crane piping materials.

complete line of plumbing materials logically. Starting with valves and fittings 75 years ago, it perfected them to a point where they were absolutely dependable before it placed any fixtures on the market.

The wisdom of this policy has been proved by the experience of thousands of schools the world over, who have kept costs down, and efficiency up by seeing to it that their piping materials as well as fixtures were of Crane quality.



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heat so regulated that occupants are seldom conscious of it-heat so perfectly regulated that fuel costs drop 25 to 40 per cent.

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positive, simple, ever - dependable! Various models for varied require-

Write for descriptive literature and endorsements from school architects.

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PROGRESS IN SCHOOL HEALTH WORK AT EVANSVILLE

-Splendid progress in school-medical-inspection work at Evansville, Ind., has been reported during the two-year period following the survey of 1927, made by Dr. Robert Oleson of the U. S. Public Health Service. In connection with his report at the completion of the survey in 1927, Dr. Oleson made 15 distinct recommendations for improving the service, 12 of which have been definitely and thoroughly carried out.

The work has been in charge of Dr. C. C. Wilson, assisted by Dr. D. G. Tweedall. Under Dr. Wilson's direction, several of Dr. Oleson's recommendations were carried out. He organized the present method of examination whereby parents are notified of children's examinations and are asked to confer with the physician.

During the period from September, 1927, to June, 1928, a total of 360 parents out of 844 examinations were present, which represented a total attendance of 43 per cent. A weighing and measuring program is carried out, and each month the weight is sent to the parents on the report card, with letters sug-gesting means of bringing the weight up to normal. Conference examinations are conducted in the kindergarten and first grade, third grade, and sixth

Hearing is tested by an audiometer in the elementary and high schools. Defects are discovered which would otherwise be overlooked. Deafness is prevented by immediate instruction to parents to have the impairments corrected. In the case of indigent children the matter is referred to the township

Much educational work has been done along the line of immunization and vaccination with some good results. At least 70 per cent of the children been immunized against smallpox.

Wr. Wilson reports that the parents have responded in the work and the board of health has cooperated to a large extent. Clinics for vaccination and immunization are maintained by the board of health for indigent children.

An innovation in health work which has had some far-reaching results is the health ribbon awards, begun on a small scale three or four years ago by the health committee of the parent-teacher association council. The ribbon awards were at first limited to pupils of the first four grades, but last year the plan was made city-wide in scope. Three ribbons are awarded: white for protection against smallpox and diphtheria; red for absence of remedial defects; and blue for both the first and second conditions. This year the gold ribbon replaces the blue ribbon, which stands for achievement. Last year 907 blue ribbons were awarded: 9.1 per cent of the pupils in the elementary schools; 1,619 red ribbons, 16.2 per cent; and 5,416 white ribbons, 55 per cent. This year increased interest is being shown by children working for the awards.

The summer round-up work has developed into a project of considerable benefit to the city. The parent-teacher associations have cooperated with the health department in the movement to have children examined before entering the schools. The goal is to have preschool children 100 per cent free from remedial defects and protected from smallpox and diphtheria.

A recommendation which should be carried out in the near future is that of providing for more and better dental service through the employment of a full-time dentist for indigent children. At present the only facilities for dental care of indigent children is maintained by the board of health.

An important part of the school-health work has been the elimination of the old types of toilet rooms and the installation of a complete sanitary equipment. During the summer there was completed a five-year building program for the sanitary improvement of the schools, at a cost of \$25,840.

SCHOOL HEADS

The Municipal Information Bureau of the University Extension Division at Madison, Wis., has compiled data showing that the salaries paid county superintendents of schools in the state range from \$4,500 in Milwaukee county to \$1,400 in Wash-

burn county. Dane county employs two county superintendents, at \$2,200 each.

Expenses in addition to salaries mentioned are paid superintendents in the following counties: Door, \$2,500; Langlade, \$2,000; Pierce, \$2,000; and Waupaca, \$2,000. Lafayette and Waushara

counties, both pay salaries of \$1,800.

The \$3,000 salary paid by Ashland county includes expenses. A number of counties pay superintendents eight or ten cents a mile for traveling expenses. A total of 16 counties pay salaries of \$2,000 to their superintendents. 000 to their superintendents.

PERSONAL NEWS

-MR. OTIS G. WILSON, superintendent of schools at Fairmont, W. Va., has annouced his retirement from the school system on September 1, 1930. Mr. Wilson will retire with the completion of fifteen years of service to the Fairmont school system. During his period of service, an extensive schoolbuilding program, involving four new schools, was completed.

-Supt. L. T. Cook of Sherman, Tex., has been reelected for a new two-year term.

-Warren P. Williamson, T. Lamar Jackson, and William C. Gubbins, were elected members of Youngstown, Ohio, school board. The Vindicator, a local newspaper, regards them as "towers of strength."

-J. B. Manry, of the Double Churches community, Muscogee county, Georgia, was chosen a member of the county school board.

The newly organized school board of Newport Harbor Union High School District, Newport, Calif., has elected the following officers: President, MR. LEROY P. ANDERSON; secretary, Mrs. Frances NELSON. Mr. Anderson and Mr. THEODORE ROBINS were elected for three-year terms; Mrs. Nelson for a two-year term; and Dr. F. C. FERRY for a short term, to serve until May, 1930.

-JAMES TODD, attorney for the Chicago board of education, who was recently deprived of his power, has presented to the supreme court in Springfield, a petition for a writ of mandamus reinstating him

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Installed in this Massachusetts High School

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Floors in first class condition promote cleanliness, make sweeping easier.

Dual use in maintenance and manual training reduces amount of equipment needed.

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The Clarke Vacuum Portable Sander is amazing school officials all over the country just as it has won favor among wood-working shops, building contractors and all who have wood finishing problems. A small, compact machine, yet capable of doing quality and quantity work surpassed by no other sander, it is easy to operate and move about. It requires no special wiring, operating from a light socket. With inbuilt vacuum, it makes no dust. Weighs but 22 lbs. (31 lbs. for floor work).

Its speed permits refinishing a whole room full of old scarred desk tops in one day, at the rate of one each four minutes or less. No need to remove the desks. The vacuum feature permits varnishing immediately after sanding.

In refinishing floors, the Clarke is guaranteed to cover from 300 to 1,000 square feet of old, varnished floor in 8 hours, restoring a beautiful velvety smoothness. On average school floor work the Clarke will do up to 3,000 sq. ft. in 8 hours.

Other furniture, teachers' desks, tables, drawing boards, manual training benches, laboratory tables, can be easily made to look like new over a week-end by use of the Clarke.

And during classes, the manual training department finds the Clarke a great aid in teaching practical wood-working.

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Ideal for teaching practical wood-working in the manual training department.

HOW THE SUPERINTENDENT MEETS ATTENDANCE PROBLEMS

(Concluded from Page 38)

ance if those who are ill are kept at home.

The old idea that a child should never be absent, involves a distinct danger and defeats the very idea back of it.

The enforcement of school-attendance laws requires an efficient personnel to carry it on and to record facts. In Owosso a full-time truant officer is employed. She is a young woman who has had considerable teaching experience, and who has other qualifications that fit her very well for the work. She has the outlook of a true social-service worker and, when she is not busy with attendance problems, she looks after other administrative work in the school-board offices.

In selecting this person the following qualifications were kept in mind:

1. Previous school experience.

2. Considerable human understanding and sympathy.

3. Abounding energy.

4. Quick insight into real reasons for a situation, so that sham may be distinguished from true underlying causes.

5. A considerable amount of tact, firmness, and

courage.

BJ-2-30

The results obtained by the truancy officer have been most satisfactory, and truancy has been reduced to a minimum. For two days preceding the writing of this paper, not a single case occurred. Families which are known locally as social problems and which kept the former truancy officer busy, have entirely ceased troubling the full-time worker. The latter, is in a way a visiting teacher and is available to be sent to any home to explain the school's point of view, to get at the facts, and to make recommendations. In addition to handling actual truancy cases, the officer issues labor permits and takes considerable interest in the child-account-

ing routine and the standardized testing program of the school.

In a general way, the foregoing explains the Owosso plan for handling truancy problems. The system is not ideal, but it has produced excellent results.

THE INTERNSHIP FOR THE SUPERINTENDENCY

(Concluded from Page 44)

together," and must hold himself responsible for satisfactory personal relations with the superintendent.

Fourth, he must be adaptable and able to fit into new situations quickly.

Fifth, without losing his own individuality, he must regard himself as a beginner, and look to the superintendent for advice, counsel, inspiration, and professional help. At the same time he must not allow himself to become a

mere "yes" man.

The qualifications and requirements set up here may seem high and exacting for both superintendent and prospective intern. But, a number of institutions, like the University of Iowa, Teachers College, Columbia University, and Stanford University, have for some years had school systems in which they have placed interns with the superintendents. Judged by the rapid advance of these interns and their success in subsequent important administrative positions, the above requirements for a successful internship are reasonable.

Conclusion

Much has been said and written about the need for trained professional leadership in the superintendency. If the members of the department of superintendence and the university men training superintendents, really mean what they have been saying and writing, they will wake up to the possibilities of the internship for meeting this need rapidly.

If 200 able city superintendents would establish internships of two years each, taking only exceptional, well-trained interns, they could turn out each year close to 100 young men, who would be far better prepared for the superintendency than equally able but untrained men, going alone by the experience route, would be after many additional years. The chance to come in close contact with the masters in superintendency, and to short cut preparation for school-executive positions, would attract to the university departments training superintendents, via the intern route, the best brains and personalities to be found anywhere in the student bodies of those universities. Interns of this quality would render service to school systems employing them several times over the salary they were paid.

THE DUTIES OF PUBLIC-SCHOOL ADMINISTRATORS—IX

(Concluded from Page 44)

appears here as Table XLIV and includes 29 different duties. While not rated as being so distinctively of primary administrative importance as the preceding set of duties, they are rated well above average and include a large number of the duties which are treated as standard supervisory duties by the leading writers on public-school supervision.

The outstanding feature of Table XLIV is the fact that all of the four groups of administrative officers are almost equally interested in the various duties involved in the supervision of teaching. The general principals lead with a high average performance of 52 per cent for the entire group of 29 duties; then follow the superintendents with an average performance of 49 per cent; then the elementary-school principals with 45 per cent; and finally the high-school principals with 41 per cent. Considering the large number of duties listed, all of these averages are high.

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Space limitations again prevent detailed discussion of the various individual duties listed in Table XLIV, but the following performance variations between high-school and elementaryschool principals seem worthy of special notice: Discuss aims of teaching with teachers - highschool principals, 84 per cent; elementary-school principals, 59 per cent; Suggest how to conduct various types of lessons - high-school principals, 41 per cent; elementary-school principals, 56 per cent; Help teachers plan projects - high-school principals, 39 per cent; elementary-school principals, 54 per cent; Arrange for demonstration time - high-school principals, 21 per cent; elementary-school principals, 44 per cent; and Suggest plan of self-testing by pupils - high-school principals, 17 per cent; elementary-school principals, 44 per cent.

It is evident that superintendents and principals are going much further in their supervisory activities than the mere inspection and general criticism of teaching. The large percentages of administrators who help teachers provide for individual differences, who help teachers improve study habit of pupils, and who perform numerous other similarly constructive supervisory duties, indicate a genuinely professional contribution on the part of the great majority of school administrators concerned. The facts revealed in Table XLIV are well worthy of serious study by readers of this article.

SELECTION, PROMOTION, TEN-URE, AND DISMISSAL OF SCHOOL JANITOR-ENGINEERS

(Concluded from Page 54)

made largely by the boards of education. In others, it would appear that superintendents of schools have assumed this function. In all of them it appears that in too few cases has the official, who is directly responsible for the effec-

tiveness of the work — the superintendent of buildings and grounds or other supervisor of janitorial-engineering service — power to select his employees.

The Final Selection

Actual selection of applicants should without doubt be made by the superintendent of buildings and grounds, or a personnel director of janitorial-engineering service. Such an official has the motive for choosing well-qualified applicants, for he has the direct responsibility for the care of buildings. He also has, or should have, supervisory and rating devices for measuring the qualifications of applicants.

The building principal is, of course, also responsible for the work of the janitor-engineers in his building, and he and his teachers have "to live with them." Some may hold that selection should originate with him. But this would be impracticable because he is not the expert in the care of buildings. The superintendent of buildings and grounds who determines the number of janitor-engineers for each building, and who places them where they will work to best advantage, can best make recommendations for selections from among applicants. He should, of course, be directly responsible to the superintendent of schools so that janitor-engineers will realize their relationship to the educational process, and that they are under the authority of the building principal and superintendent

We may summarize what has been pointed out concerning the selection of janitor-engineers as follows:

1. Selection by the board of education or a committee or member of the board of education is likely to be influenced by personal or political reasons, and is certain to lack the professional judgment necessary for securing qualified janitor-engineers.

2. Selection on the basis of a civil service examination will be impartial, but will fail to give weight to all, or most, of the professional considerations necessary for the choice of properly qualified janitor-engineers.

3. Selection by the superintendent of buildings and grounds, or a member of his staff in charge of personnel, will usually be impartial

and professional.

The superintendent of buildings and grounds should, then, be the appointed agent of the superintendent of schools and the board of education for the selection of janitor-engineers. This does not mean that the superintendent of buildings and grounds will have the last word in filling janitorial-engineering positions. The selection of such employees should originate with him, because of his immediate responsibility for the work and the best opportunity for measuring qualifications. His recommendations should be passed on to the superintendent and through the superintendent to the board of education for final judgment and appointment.

Boards of education should adopt some rule on the selection and appointment of janitorengineers like that in Des Moines, Iowa:

All employees in the janitorial service shall be appointed and dismissed by the superintendent of buildings and grounds, subject to the approval of the superintendent of schools and the board of education.

Summary

1. School authorities should actively search for properly qualified applicants for janitorialengineering positions.

2. Formal applications should be made to the superintendent of buildings and grounds.

3. Such factors as physical condition, age, education, special training, appearance, character, etc., should be considered in determining the qualifications for janitorial-engineering positions.

(Concluded on Page 144)

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(Concluded from Page 142)

4. Appointment on the basis of a civil service examination is undesirable, since it takes from school authorities, who are responsible for the work of the schools and the care of buildings, the determination of who shall be employed as janitor-engineers.

5. Applicants for janitorial-engineering positions should be able satisfactorily to pass complete physical examinations.

6. Appointments to original positions should be made for a probationary period.

7. Janitor-engineers should be selected by the superintendent of buildings and grounds, recommended by him to the board of education, after being passed upon by the superintendent of schools, and should be approved by the board of education.

(To be continued)

PRESENT TRENDS IN THE USE OF VISUAL-INSTRUCTION AIDS

(Concluded from Page 56)

the institution has more direct contact with the schools of the state.

4. Several states, approximately 8 in number, have visual-instruction organizations such as the one in Iowa, which is a section of the Iowa State Teachers' Association. This type of organization, with its round-table feature, is one of the newer developments.

In foreign countries there is a great deal of interest in visual instruction. France and Germany lead in the field of educational scientific films. In some countries they have advanced to the point of requiring that all schools have upto-date types of projection equipment.

Progress in our own country is evidenced by the sincerity and interest that is being shown in visual instruction by teachers and others. Perhaps the newest trend is toward the use of 16 mm, film in small projectors for schoolwork.

Improvements are being made in projectors to provide for better quality of pictures on the screen. Large numbers of the users of films in Iowa have 35 mm. projectors and are using them effectively. There are, as yet, comparatively few 16 mm. machines.

The interest of large commercial firms in the educational field has resulted in the production of many good films, planned by educators, for teaching purposes. This is, indeed, a step forward, because few real educational films had been produced until recently. We may look forward to further progress in this field. New types of projectors will be developed that will greatly facilitate the use of motion pictures in the classroom. The 35 mm. film must not be overlooked in the educational field, as there is a definite place for this type of material.

Developments are taking place in talking educational pictures, and a few experimental films have been made. Several commercial concerns are interested in the production of films and portable equipment. It is quite probable that the first work in this field will come in the courses of colleges and universities.

Lantern slides are maintaining their popularity as real teaching aids. Much interest is being shown in the making of slides by the pupils and teachers in order to illustrate the work as it is developed. Better lantern slides are being made. More than ever before, emphasis is being placed on the truthful coloring of slides. This is an important feature of lantern slides which makes for effective teaching.

The film slide consists of still pictures such as might be used for lantern slides, printed on standard-width noninflammable motion-picture film. This new visual aid is increasing in popularity. The picture on the film is small, compared to a lantern slide, and consequently the size of the projected picture cannot be as large. However, the extreme simplicity and ease of

presenting a continuous group of pictures on film, as well as the low cost, are factors that have made this visual aid popular in many parts of the country. Suggestions have been made that the double-frame picture on standard-width film would make a more effective medium than the "single frame" now used. This would mean the use of a picture just twice the size of the present film-slide picture, of approximately 1 by 2 inches in size. Developments may be expected in this connection.

THE JAMESTOWN SCHOOL-ADMINISTRATION BUILDING, JAMESTOWN, N. Y.

JAMESTOWN, N. Y.

(Concluded from Page 46)

The total cost of the building was \$80,000; the cost of building construction was \$71,098; the cost of the equipment was \$8,902.

Construction Data

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Dimension	ns .															1	20	ft.	by	150	ft.
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Total cost of building\$80,000
TEACHERS AND ADMINISTRATION

Cost of furniture and equipment.....

—A survey of the financial status and operation of the Michigan Teachers' Retirement Fund has been begun under the direction of Senator Charles Sink, of Ann Arbor. The principal defect of the retirement law, according to Senator Sink, is the fact that it pays out more in benefits than it receives in contributions from the salaries. At the present rate, it is believed the fund will soon be defunct. The present problem is to devise a means for increasing the revenue for the support of the retirement fund.

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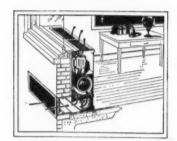


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THE JOHN HAY HIGH SCHOOL

(Concluded from Page 59)

Drawings have been prepared for landscaping the balance of the property to the east of the building, and the sketches provide for a large play area, surrounded by a running track and tennis courts, volley-ball courts, etc., all of which will be surrounded by suitable landscape work to complete the architectural setting of the entire project.

The building has been erected to accommo-

date 2,500 pupils, and was completed at a cost of \$1,742,000, including furniture and equipment.

The building was formally dedicated October 23, 1929, by former senator James W. Wadsworth, of New York, son-in-law of John Hay.

The building was constructed under the direction of Mr. James R. Mills, chairman of the school-building committee, and the educational features of the building layout were under the supervision of Mr. Charles H. Lake, assistant superintendent of schools.

THE BOSTON SURVEY REPORT A number of important changes in the Boston

A number of important changes in the Boston school system are recommended in the report recently submitted by the survey committee of nine members, which conducted a study of all phases of the schools for more than a year and a half.

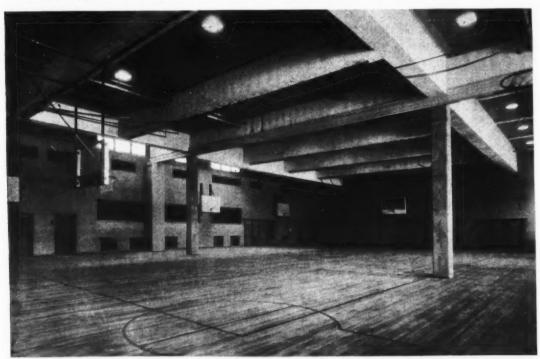
Among the findings of the survey committee is the statement that the committee believes the building of schoolhouses is properly considered recurrent expense and should be met by current revenue, not by borrowing. Schoolhouses and sites should be paid for out of taxes and not by issuing bonds.

The causes of the increased school expenditures are explained by such influencing factors as the diminished power of the dollar, increased school attendance in the intermediate and high schools, increased number of teachers, increased compensation of teachers, construction of new buildings, expansion of special education, and increased cost of maintenance, alterations, and repairs.

The report recommends that admission to the local teachers' college be limited to the number of teaching positions which will probably be filled by graduates of that institution. It is emphasized that the high standard of the normal school is essential and it is recommended that four-year courses replace the present three-year course.

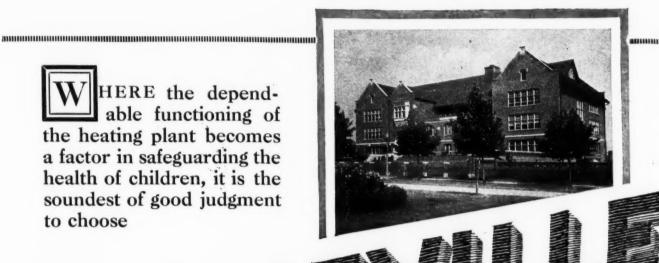
The committee urges even competition between graduates of the teachers' college and those who have secured their training outside the city, in securing teaching positions in the school system. It is the opinion of the survey committee that all examinations for teaching positions in the service shall be competitive. In no group should there be preferential or so-called "inside" lists. In each group the graduates of the teachers' college of the City of Boston should compete on even terms with those who have pursued equivalent courses elsewhere

The survey committee was appointed in March, 1928, and has devoted practically full time to studies and investigations, the results of which have served as the basis of reports to the full committee.



GYMNASIUM, THE JOHN HAY HIGH SCHOOL, CLEVELAND, OHIO George M. Hopkinson, Architect, Cleveland, Ohio

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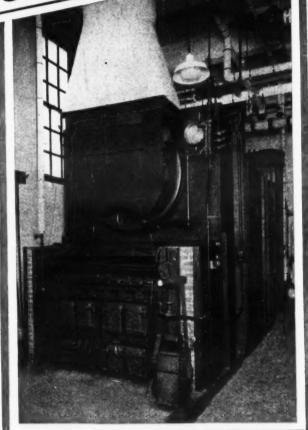
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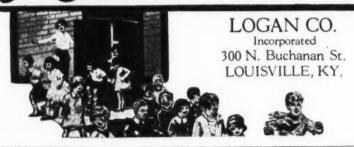
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TENTATIVE PROGRAM FOR THE DEPARTMENT OF SUPERIN-TENDENCE MEETING AT

ATLANTIC CITY (Continued from Page 69)

Group Five: Administration, Mr. M. C. Potter, superintendent of schools, Milwaukee, Wis. Group Six: The School Plant — Buildings and Equipment, Mr. H. W. Anderson, deputy superintendent of

Schools, Denver, Colo.

Group Seven: The School Plant—Operation and Maintenance, Mr. Nicholas Bauer, superintendent of schools, New Orleans, La.

Group Eight: Personnel—Rating and Standards, Mice Person A Person assistant superintendent of schools.

Miss Rose A. Pesta, assistant superintendent of schools, Chicago, Ill.

Group Nine: Personnel - Salaries, Mr. George Melcher, superintendent of schools, Kansas City, Mo. Group Ten: Finance, Mr. David E. Weglein, superin-

tendent of schools, Baltimore, Md.

Group Eleven: Public Relations and Publicity Pro-

Group Eleven: Public Relations and Publicity Program, Mr. J. J. Early, superintendent of schools, Sheridan, Wyo.
Group Twelve: Public Relations — Coöperation with Outside Organizations, Mr. Thomas R. Cole, superintendent of schools, Seattle, Wash.
Group Meetings — Wednesday Afternoon, February 26 Group One: State Departments of Education, Mr. Charles H. Elliott, state commissioner of education, Trenton, N. J.
Group Two: County Superintendents, Miss Kate

Group Two: County Superintendents, Miss Kate Wofford, county superintendent of schools, Laurens,

Group Three: Superintendents of Cities with Population of Less than 10,000, Mr. John L. Bracken, superintendent of schools, Clayton, Mo.

Group Four: Superintendents of Cities with Population from 10,000 to 50,000, Mr. A. W. Elliott, superintendent of schools, Mt. Vernon, Ohio.

Group Five: Superintendents of Cities with Population from 50,000 to 100,000, Mr. J. W. Sexton, superintendent of schools, Lansing, Mich.

Group Six: Superintendents of Cities with Popula-tion from 100,000 to 200,000, Mr. A. H. Hughey, superintendent of schools, El Paso, Tex.

Group Seven: Superintendents of Cities with Population over 200,000, Mr. William J. Bogan, superintendent of schools, Chicago, Ill.

Some of the Speakers

Among the distinguished educators who will preside at the general sessions, or appear as speakers, are the following:

Mrs. Edith B. Joynes, president, Department of Classroom Teachers of the N.E.A., 1928-29.

Mrs. Susan M. Dorsey, superintendent emeritus,

Los Angeles, Calif.
Father J. Elliot Ross, chaplain to Catholic students, State University of Iowa, Iowa City, Iowa. Paul C. Stetson, superintendent of schools, Dayton, Ohio.

Charles H. Judd, director, school of education, University of Chicago, Chicago, Ill.

John H. Logan, superintendent of schools, Newark, N. J.

J. B. Edmonson, dean, school of education, University of Michigan, Ann Arbor, Mich.

N. L. Engelhardt, Teachers College, Columbia University, New York, N. Y.

C. B. Glenn, superintendent of schools, Birmingham, Ala. Frank W. Ballou, superintendent of schools,

Washington, D. C.

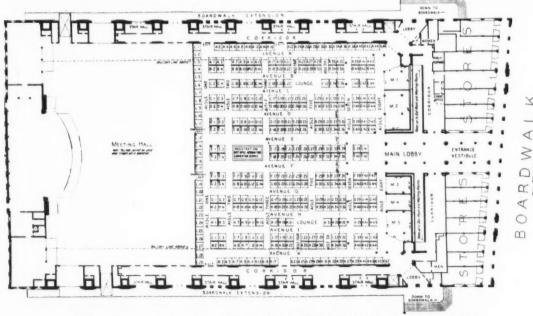
Francis G. Blair, state superintendent of public instruction, Springfield, Ill. John L. Bracken, superintendent of schools,

Clayton, Mo.
A. W. Elliott, superintendent of schools, Mt.

Vernon, Ohio. J. W. Sexton, superintendent of schools, Lansing,

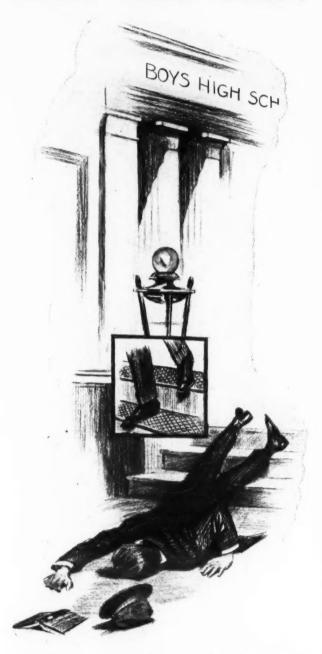
A. H. Hughey, superintendent of schools, El Paso, Texas.

William J. Bogan, superintendent of schools, Chicago, Ill. (Concluded on Page 151)



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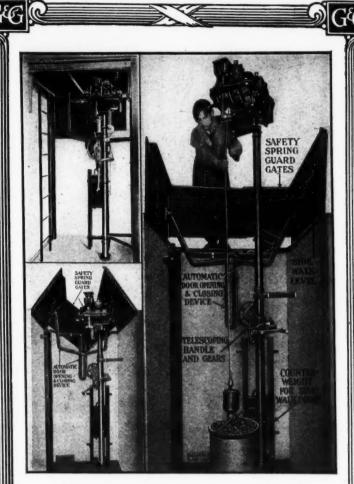
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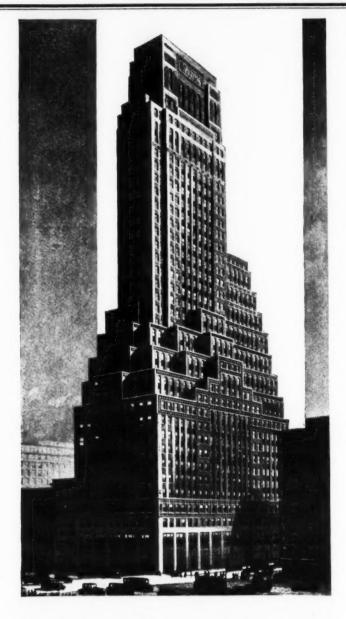
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(Concluded from Page 148)

Arthur C. Perry, district superintendent of schools, New York, N. Y.

James E. Rogers, 315 Fourth Avenue, New York, N. Y.

Lois Hayden Meek, associate director, child-development institute, Teachers College, Columbia

University, New York, N. Y.
J. F. Noonan, superintendent of schools, Mahanoy City, Pa.

C. H. Garwood, superintendent of schools, Harrisburg, Pa.

George F. Arps, dean, college of education, Ohio State University, Columbus, Ohio. Walter R. Hepner, superintendent of schools,

San Diego, Calif.

M. C. Potter, superintendent of schools, Milwaukee, Wis.

H. W. Anderson, deputy superintendent of schools, Denver, Colo.

Nicholas Bauer, superintendent of schools, New Orleans, La.

Rose A. Pesta, assistant superintendent of schools, Chicago, Ill.

George Melcher, superintendent of schools, Kansas City, Mo.
David E. Weglein, superintendent of schools, Baltimore, Md.

J. J. Early, superintendent of schools, Sheridan,

Wyoming. Thomas R. Cole, superintendent of schools, Seattle, Wash.

Kate Wofford, county superintendent of schools, Laurens, S. C.

SEATTLE'S JUNIOR SAFETY PATROL

Not a single accident occurred during 1929 to the school children at the street crossings manned by the junior safety patrol, of Seattle, Wash. In a report submitted by Mr. G. W. Kimball, in charge of the safety work, he showed that the patrol operated in 91 schools, which included 15 patrol operated. parochial and 4 special schools.

The number of pupils serving as members of the patrol was 1,042. The number of street crossings provided for was 214. The number of children crossing the streets at these points was 180,000 per day, 900,000 per week, and 23,120,000 during the school term of 184 days.

During the year 1928 about 108 children were injured. In 1929 there were no injuries. The number of injuries in school buildings and on school grounds was also materially reduced. The report also showed that 225 drivers were called by the police. During the year there were 109 talks on school-patrol safety and juvenile delinquence conducted in 85 schools, reaching a total of 43,000

DR. GEORGE BACON, PUBLISHER, DIES

Dr. George A. Bacon, for many years a member of the Boston educational publishing house of Allyn & Bacon, died on January 14, in Atlantic City, at the age of 82.

Dr. Bacon was born at Webster, Mass., January 17, 1847, and was educated at Brown University. He took postgraduate work in the United States and in Germany, and in 1871 he received the degree of Ph.D. at Hamilton College. He was married in 1871 to Susan Hillman. From 1867 to 1868 he was principal of the academy at Derby, Vt. Later he held positions in the high school at Gardner, Mass., Syracuse, N. Y., and Brooklyn, N. Y.

In 1888, Dr. Bacon left schoolwork to establish the very successful firm of Allyn & Bacon. Dr. Bacon's interests were mainly in the high-school field, and his firm naturally specialized in highschool texts.



ATLANTIC CITY AUDITORIUM AND EXHIBIT HALL WHERE DEPARTMENT OF SUPERINTENDENCE WILL MEET

Book News and Reviews

THE COST OF SCHOOL TEXTBOOKS

A study of school and college textbook costs, made recently by Mr. Frank M. Phillips, of the U. S. Department of the Interior, shows that a total of 60 publishers had net sales amounting to \$49,097,466 for the year 1928. For elementary-school purposes, 39, 406,677 books were sold for \$22,735,745 net; for high-school purposes, 18,683,290 books for \$16,288,422 net; and for college, university, professional school, and teacher-training purposes, 6,030,484 books for \$10,073,299 net. The total number of books sold during the year is 64,170,484.

The average net cost of an elementary textbook has been set at 57.7 cents; of a highschool textbook, 87.2; and of a college book, 165.7 cents; making an average for all books sold of 76.5 cents. As books are generally sold at 20 or 25 per cent off the list price, it is necessary to add 25 or 33 per cent to the net cost in order to determine the actual cost per book at retail.

Although it is not possible to state exactly the amount of net sales that go to the public schools, it is estimated that since 91 per cent of the total school enrollment is in public schools, 91 per cent of \$39,024,067 may be assumed to be the total net sales for books used in the public schools. Of the total school expenditure, \$2,184,847,200, the amount expended for pupils' texts in all states for the year is \$23,256,151, or 65.5 per cent of the total net sales of books used in the public schools. The greater part of this is for elementary texts. Subtracting \$22,258,947, or the amount expended for pupils' texts, from \$35,511,992, gives 112,255,841 as the amount of the net sales of books bought by individuals through dealers. An average of 30 per cent profit would make \$15,932,593 the cost to the general public for new books for the year. The estimated net expenditure by individuals for textbooks used in public schools is between 16 and 17 million dollars for the year.

Based on estimated net sales of \$22,735,745 for public schools in 1928, the net sales amounted to \$1.412 per child enrolled during the year 1927–28. Since 1913, the school enrollment has been multiplied by one and one third, the amount expended for textbooks by two, the net sales of school textbooks by two and one half, and the total expenditures for public schools by four.

BOOK REVIEWS

The Technique of Teaching Typewriting
By Jane E. Clem. Cloth, 364 pages. Published by The Gregg Publishing Co., New York City.

The teacher of typewriting needs to know how. as well as what, to teach. The present book undertakes to tell in a very concrete and practical way the underlying principles of typewriting, and is especially intended for students who are training to become teachers of typewriting. It takes up the personal factor in teaching, the teacher's background of preparation, the qualities that make for successful teaching, and the criteria by which the teacher may measure his own work. At the end of each chapter there is a list of questions for discussion. The last part of the book contains a brief bibliography on the subject of commercial training.

High School Geography (Revised)

By R. H. Whitbeck. Cloth, 574 pages. Price, \$2. Published by The Macmillan Company, New York City.

Professor Whitbeck explains in his preface that the revisions he has engaged in deal with the human side of geography study. This is especially true of the sections on Canada, Russia, Japan, and China,

and such industries as petroleum, rubber, and sugar. The subject matter of the balance is not changed.

In preparing this book the author holds to the thought that the geography intended for secondary schools should lay stress on the human side of things, and point out the influence of geographical environment upon man's mode of life and his principal activities.

Thus the several chapters lead the student into various climes on the globe, describe their natural peculiarities and the manner in which man avails himself of nature's offerings. The agricultural, industrial, and commercial pursuits carried on in all parts of the world come in for adequate attention.

In addition to a series of illuminating maps and graphs, the text is accompanied by a good selection of illustrations, showing sights and scenes on land and sea in an interesting way.

The Lady of the Lake
By Walter Scott. Cloth, 169 pages. Price, 60 cents. The Macmillan Company, New York City.

This pocket classic is a reprint of the third and most popular of Scott's poems. The style, typography, illustrations, and decorative treatment are similar to the rest of the series produced by the Macmillan Company. The introduction includes brief explanatory notes and other suggestive helps for the student.

Directed Study Guides for Pitkin and Hughes' Seeing America Farm and Field

By Alma Leonhardy, Grace W. Hogoboom, and Elizabeth Van Patten. The Macmillan Company, New York City.

This booklet is a guide for pupils in training for reading comprehension. The material may be used in connection with individual notebooks, in which the pupils collect illustrations, clippings, magazine articles, and other material relating to the project in hand. Provision has been made for a review test and a progress chart, in which the pupils are encouraged to check their work.

By William Shakespeare. Cloth, 176 pages. Price, 60 cents. The Macmillan Company, New York City.

The present book is one of the series of Macmillan pocket classics. Especial care has been taken to provide a reliable text. The book is enhanced with a series of explanatory notes, historical allusions, interpretive comments, and suggestive questions. It is illustrated with a few well-chosen penand-ink drawings and is bound in red leatherette.

Pupil's Workbook

By Harold Rugg and James E. Mendenhall. Paper, 80 pages. Price, 36 cents. Published by Ginn

& Company, Boston, Mass.

The present workbook has been prepared to accompany the author's Introduction to American Civilization. For each chapter in the textbook, there is a corresponding problem in the workbook, as well as questions and exercises covering the important problems discussed. Space is given for rating the pupils' classwork.

By F. R. Smith. Boards, 113 pages. Price, \$1. Isaac Pitman & Sons, New York City.

The present book offers a very complete and simple text on bookbinding, which is entirely practi-

Textbook publishing is not job printing; a state-owned printing plant would lack wholly the editorial acumen, guidance, and breadth of experience, which, far more usually, than the authorship that is stated on the various titlepages, makes for the creation of really valuable educational tools. Furthermore, pupils ought to buy new textbooks from year to year. Education is very much alive, making great strides of progress. Would the home like a year-before-last's radio or automobile? The tools of the schoolroom are improving almost, or quite, as fast.-Peabody Journal of Education.

cal for use in school shops, where courses of a vocational character are taught.

The book begins with a discussion of the tools, apparatus, and materials necessary for bookbinding, and then proceeds to explain the various processes employed, including forwarding, folding, stripping and cleaning, repairing, knocking up, mending, marking and sizing, collating, making signatures, trimming, marking up, sawing, sewing, gluing up, attaching the boards, sprinkling, scraping, covering, tooling, and lettering.

The authors have produced a book in which the hand of the craftsman is shown through the excellent workmanship, clear instructions, and logical arrangement of material.

Children Well and Happy
By May Dickinson Kimball, R. N. Cloth, 128 pages. Price, 80 cents. F. S. Crofts & Company, New York City.

This book offers instruction on the proper care of the young child. It takes the form of a mothercraft text to be used in connection with mothercraft and child-nursery classes. The topics taken up are personal hygiene, home sanitation, habits and training, and care of the teeth; in a word, the entire physical care of small children.

Instructional Tests in Arithmetic for Beginners
By John R. Clark, Arthur S. Otis, and Caroline
Hatton. Test book, 64 pages, price 24 cents;
diagnostic record, 16 pages, price 12 cents; teachers' manual, 14 pages. Published by the World Book Company, Yonkers, N. Y.

This material offers a practical and systematic treatment of the basic processes in addition and subtraction for use in the primary grades. The pupils' test book includes ten addition tests, ten subtraction tests, and four special diagnostic tests, all in duplicate, so that they may be used for retesting and practice. The diagnostic record provides a means of checking each pupil's difficulties on each of the basic facts.

A teachers' manual provides for individual drill with flash cards, gives directions for conducting the written tests, for providing remedial practice, for dictating illustrative problems, for giving diagnostic tests, and reviewing the facts learned to determine the permanence of learning and the correction of deficiencies.

The plan recognizes the importance of accuracy of initial learning and the necessity of a complete individual mastery of each part of the work.

Sketching for the Draftsman
By H. W. Michelson and R. O. Buck. Paper, 111 pages. Published by The Bruce Publishing Company, Milwaukee, Wis.

The principles and conventions of free-hand sketching as one of the most useful accomplishments of the technically trained man are here emphasized. The method and the problems take the mystery out of true perspective, cabinet, and isometric drawing. The work is most valuable for vocational classes and high-school groups.

Modern School Individual Number Cards

By John R. Clark, Arthur S. Otis, and Caroline Hatton. Set I, addition facts; Set II, subtraction facts; Set III, multiplication facts; Set IV, division facts. Price, 30 cents per set. Published by the World Book Co., Yonkers, N. Y.

These four sets of flash cards cover the basic number processes with whole numbers. Each card has a number combination on one side without the answer, and on the other with the answer, so that the pupil may avoid the danger of forming wrong associations at the beginning. The combinations are arranged in accordance with the tables of facts given in First Steps in Teaching Numbers.

Beginning Chemistry

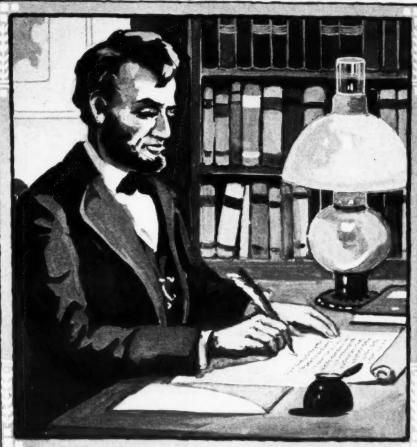
By Gustav L. Fletcher, Herbert O. Smith, and Benjamin Harrow. Cloth, 476 pages. Published by American Book Company, New York City.

The authors, who have brought to the making of this book some twenty years of experience as instructors in physical science, are of the opinion that the approach to the subject should be more gradual than is usually the case. The first six chapters have been written with this in mind.

While the book is an elementary text, it recognizes the progress made in the field of chemistry of recent years. In some respects, namely, in the grouping of subjects, it is a departure from other similar books. The beginning chapters deal with an historic introduction, followed with chapters
(Continued on Page 154) XX



The primitive log cabin at Hodgensville, Kentucky, where Lincoln was born. From this home to the nearest school was a distance of five miles where the teacher taught reading, writing and elementary arithmetic.



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Your correspondence is solicited and will have prompt attention.

(Concluded from Page 152)

on earth, air, fire, water, etc. Then the authors engage in the formal discussion of chemical change, formulas and equations, acids, bases and salts, rocks, glass, ceramics, fuels, explosions, and the like. There are also chapters on metals, alloys, iron, electricity, plastics, photography, paints and varnishes, etc., etc.

Each chapter is followed by a set of questions. A bibliography, enabling a course of supplementary reading, is provided. The book is liberally illus-

Irving's Sketch Book
Edited by H. Y. Moffett. Cloth, 487 pages. Price,
60 cents. The Macmillan Company, New York City.

The New York Evening Post, in its issue for June 26, 1819, had the following to say about The Sketch Book: "The grace of style; the rich, warm tone of benevolent feeling; the freely flowing vein of hearty and happy humor, and the fine-eyed spirit of observation, sustained by an enlightened understanding and regulated by a perception of fitnessa tact-wonderfully quick and sure, for which Mr. Irving has been heretofore so much distinguished, are all exhibited anew in the Sketch Book with freshened beauty and added charms." A hundred and ten years later, the book has the same charm and the same appeal.

Fitting Farm Tools
By Louis M. Roehl. Paper, 102 pages. Published by The Bruce Publishing Company, Milwaukee,

This book is devoted to the farmer's most common shop job, that of sharpening tools. Attention is also given to fitting handles, and repairing broken equipment. Some forty odd jobs are provided. In each instance, specific instruction is given as to the work to be done. Ample illustrations are supplied.

Anton and Trini

By Virginia Olcott, with illustrations by Constance Whittemore. Cloth, 152 pages. Price, 76 cents. Published by Silver, Burdett & Company,

This attractive little book tells about children who live in the mountain country of Switzerland, in delightful story form, enlivened with colored

pictures. The author, who spent much time in the Alpine region, leads her readers into the wholesome atmosphere of Switzerland as a unique country and introduces them to the charm of Swiss child life.

Thrift Through Education
By Carobel Murphy, Ph.D. Leather bound, 150
pages. Price, \$1. Published by A. S. Barnes & Co., New York City.

Here is a book on thrift applied to school children. The author has evolved the subject out of her experience as an instructor. She proceeds upon the thought that self-reliance is a cardinal need in life and that thrift is an expression of self-reliance.

The several chapters deal with the historic side of the subject, the psychological basis of thrift education, and the practical procedure in thrift courses. The appendix provides tests and plays, exemplifying the value of economy, and a wise expenditure of money.

Practical Arithmetic Workbooks

By John G. Fowlkes, Thomas T. Goff, William S. Taylor, and Wendell W. Wright. Paper, 72 pages. Published by The Macmillan Company, New York

Here are seven books, a primer, and a series numbered one to six. They constitute a well-graded series of self-study lessons.

The authors tell the boys and girls that the books have been written "so that (1) you may have practice in using the arithmetic you have learned; (2) you may find out the arithmetic you once knew but have forgotten, and (3) you may learn again the arithmetic you have forgotten."

The Development of the United States

By Wilson P. Shortridge. Cloth, 761 pages. Price, \$2. The Macmillan Co., New York City.

The author who attempts to write another school history, in the face of the many histories already in the market, must have some legitimate reasons for doing so. The author, in this instance, who has taught history for many years, comes forward with such reasons - reasons which have the ring of

Primarily, he believes that the part of the United States which is characteristically American, and which gives the country its economic and civic momentum, is the west. It deserves, he believes,

His second reason for writing the history is equally legitimate. Since the Civil War, the histories taught in the south were different from those taught in the north. The time had to come when some schoolmaster, sufficiently big and broad, must attempt a history lesson which told the truth so forcibly and well as to make it acceptable to both sides. Professor Shortridge, who holds the chair of history in the University of West Virginia, has taught history on both sides of the Mason and Dixon line and knows exactly what is here implied. While the controversial influences have not entirely passed away, it is clear, nevertheless, that the younger generation asks for an impartial statement

greater attention than has thus far been given to it.

In the third place, the author traces the growth of centralization in government. He makes this clear. He also stresses the question of the nation's foreign relations, and its ascendancy as a world power, and finally gives attention to the story of

The book is divided into 5 parts and 34 chapters. The appendix supplies the nation's great basic documents, list of presidents, population statistics, etc. Illustrations are supplied. Also a series of colored

of historic facts

Short Scenes from Shakespeare
By Isabel M. Gray. Cloth, 362 pages. Price, \$1.60.
The Macmillan Co., New York City.
The most striking scenes taken from fifteen
Shakespeare plays, together with instructions how to act them, are presented in this book. Thus, for Nothing deals with "A Trap Set for Beatrice." Act III, Scene I, of Much Ado About Nothing deals with "A Trap Set for Beatrice." Act III, Scene 4, of King Henry V presents "The English Lesson," and so on. Excerpts are taken from such plays as Two Gentlemen of Verona, As You Like It, All's Well that Ends Well, etc.

The preparation of the book proceeds upon the thought that short scenes may be acted by a body of students, thus bringing to them an understanding and appreciation of the greatest of English dramas. The presentation of each scene is followed by explanatory notes familiarizing the student-player with the characters in the play and the exact meaning of the language employed.

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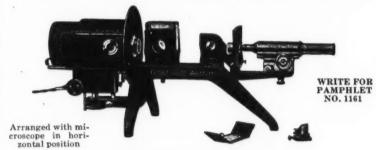
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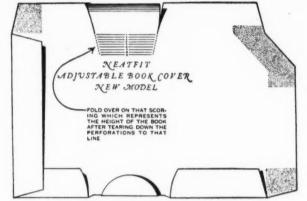
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(Concluded from Page 154) Home Nursing and Child Care

By C. E. Turner, Nell J. Morgan, and Georgie B. Collins. Cloth 282 pages. Published by D. C. Heath and Company, New York, N. Y.

The simple, but important, elements of the home care of the sick are outlined in this well-balanced book. Four chapters are devoted to the care of infants and small children, and several chapters take up personal hygiene and nursing as a profession. The entire book has that practical, matter-offact tone, which reflects the broad experience of the authors. Perhaps the best feature of the work is the constant insistence upon health and health habits, and the quite obvious application to the student herself of all that is discussed and recommended. At the ninth- and tenth-grade levels, the book will be found especially valuable.

Elementary Laboratory Aerodynamics
By A. L. Jordan. Paper, 68 pages. Price, 80 cents. The Ronald Press, New York, N. Y.

This laboratory manual is written for eleventhyear classes. The 25 experiments cover the basic principles of airplane construction and flying.

Practical Arithmetic Work Books

By J. G. Fowlkes, T. T. Goff, W. S. Taylor, and
W. W. Wright. Seven books, 72 pp. each. Price,
28 cents each. The Macmillan Company, New

Self-activity, self-discovery, correction of errors, and self-direction in drill are the basic ideas upon which these well-balanced work books are built. While material of this kind will not meet all situations, it invariably is better than that which the busy teacher has time to develop.

Manual of Cataloging and Classification for Elementary-School Libraries

By Margaret Fullerton Johnson. Paper, 45 pages. The H. W. Wilson Company, New York, N. Y.
This booklet is a guide for elementary-schoo

librarians in making a simple, consistent, and unified catalog of schoolbooks.

In compiling the booklet, use has been made of the accepted cataloging principles and of methods which have been found acceptable for small public libraries. The material has been thoroughly tested in connection with a course in cataloging at the

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Detroit Teachers' College and may be relied upon for use in the public schools.

The booklet discusses in detail collation, imprinting, subject headings, analytics, cross references, shelf lists, accessions, and the preparation of the inventory. The last section contains space for instructions on classification and filing, rules for filing cards, and a short list of common abbreviations in library work.

PUBLICATIONS RECEIVED

Attitudes as Factors of Scholastic Success. By M. E. Herriott, Los Angeles, Calif. Cloth, 72 pages. Price, 50 cents. Issued by the University of Illinois, Urbana. The study had for its purpose the determination of the significance of attitudes as factors of scholastic success college, and their relation to other factors of scholastic success

As a result of the study it was found that it is not possible to tell to what extent the teacher's marks are measures of that which is learned in a given course. What is learned, however, is probably the most important element that enters into the determination of a mark. The training tests were selected on the basis a mark. The training tests were selected on the basis of the statements of instructors as to the knowledge they assumed their students had obtained from the required course, and were constructed according to certain recognized principles in the making of newtype tests. It was not possible to tell whether the test of reading rate gave a measure of the optimum, of the representative, or of some other rate of reading. In justification of the validity of the measures of rate, it should be pointed out that the content and the purposes set by the reading test appear to be typical of the reading required in the field of education. The test of reading required in the field of education. The test of reading comprehension produced scores that correlated so highly with marks in the preceding course, training-test scores, intelligence-test scores, and ratings of the evaluative-nonevaluative attitude that the zero order coefficient with criterion of success was dissipated. The author believes that reading comprehension is a composite rather than a unit, and that the test used confused the issue by employing educational content, thus making for a poor measure of reading comprehension where such exists as a separate entity.

There is very little, if anything, in the data by which one may infer the validity of the study-habits ques-tionnaire. The relatively low coefficients of correlation between the study-habits score, and the other measures, as well as the fact the coefficient of correlation with the criterion of success rose, indicates that it at least

measures something which is in the main distinct from those things measured by other instruments.

Inasmuch as all the other measures employed in the study were devised in only one form for immediate use, or were of the nature of ratings of which only one of each kind was made, it is not possible to report

any measures of reliability.

Inspected Electrical Appliances, October, 1929.

Issued by the National Board of Fire Underwriters,

Chicago, Ill. Contains a list of all electrical appliances inspected up to April, 1929.

Secretary's Annual Report for the School District of Tacoma, Wash., June, 1929. The report for the school year 1928-29 shows that, although the budget was cut below conservative, actual needs, the relies of below conservative, actual needs, the policy of retrenchment was continued month by month through the year, so that the expenditures for capital outlay and operating expenses were \$43,823 less than the budget, and \$47,331 below last year's expenditures. The reduction was accomplished by eliminating certain items from the budget by limiting maintenance. items from the budget, by limiting maintenance, deferring improvements, and by a reduction in the number of teachers. The average cost per pupil amounted to \$88.23, which is a decrease of \$1.88 per

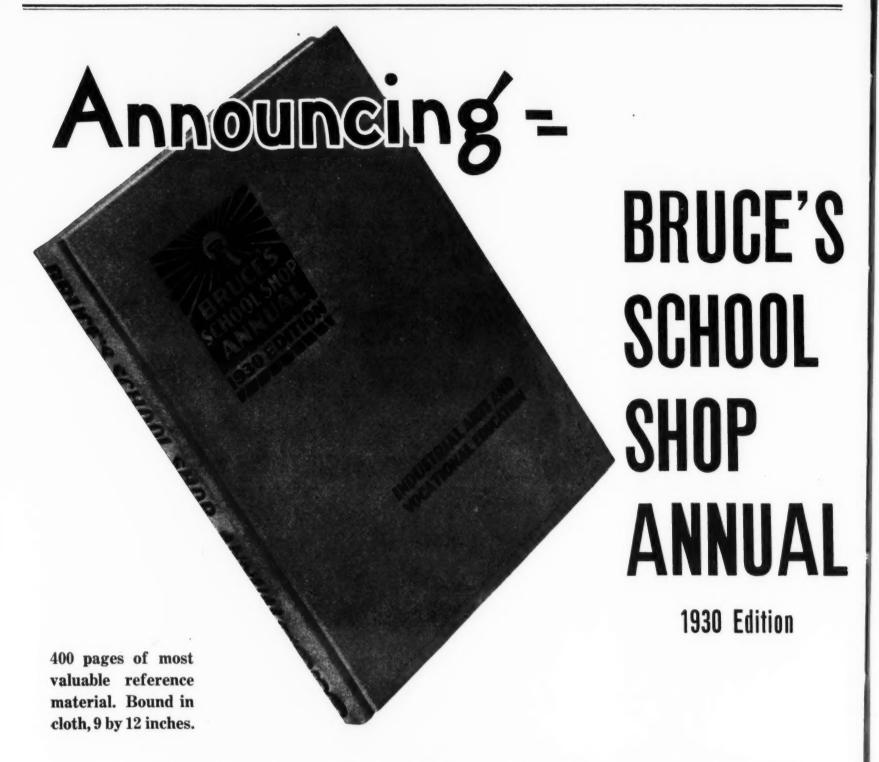
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The cost of general control increased \$7,912. While the salaries of teachers and principals were lower in total by \$15,383, the average salary paid all teachers increased from \$1,910 to \$1,933 under the regular

salary schedule.

Statistics of Private High Schools and Academies, 1927-28. By Frank M. Phillips. Bulletin No. 19, 1920. Issued by the U. S. Office of Education, Washington, D. C. The pamphlet gives statistics about 2,448 private high schools and academies for the school year 1927-28. The report shows that, while the number of schools reporting has increased but 200 or 8.9 per cent over the number reporting in 1915, the number of secondaryschool pupils enrolled has increased 73.6 per cent, the number in the fourth year increased 88.7 per cent, and the number of graduates increased 107.3 per cent. indicates a tendency to larger schools, rather than more schools. Practically all of the private schools are organized on the regular four-year basis, and only a few reported junior or senior departments or divisions.



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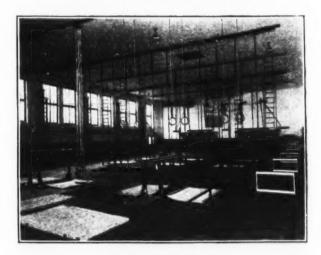
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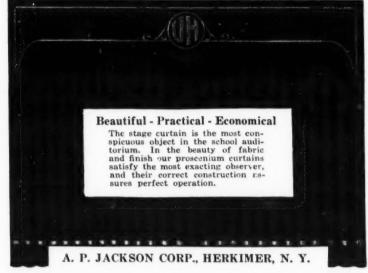
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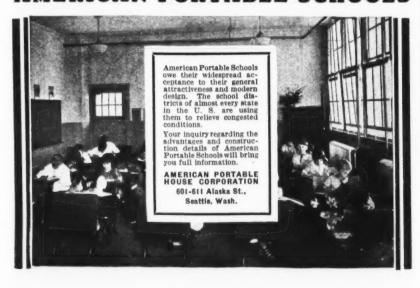




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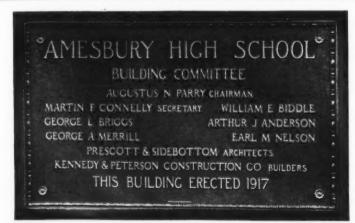
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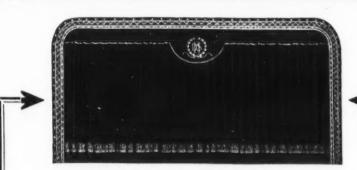


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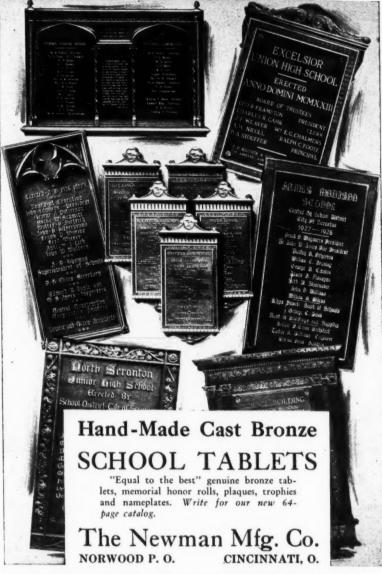


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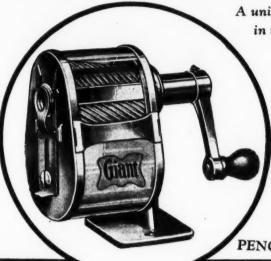
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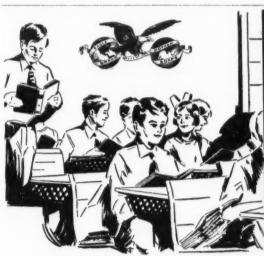
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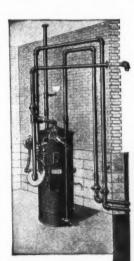
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Clow & Sons, James B.
Copper & Brass Research Association
Crane Company
Hoffmann & Billings Mfg. Co.
Rundle-Spence Mfg. Company
Vogel Company, Joseph A.

POINTERS N. Y. Silicate Book Slate Co. Weber Costello Company PORTABLE BLEACHERS
Circle A Products Corp.
Minter Homes Corporation
Wayne Iron Works

Wayne Iron Works
PORTABLE SANDING MACHINES
Clarke Sanding Machine Company
PORTABLE SCHOOLHOUSES
American Portable House Co.
Asbestos Buildings Co.
Circle A Products Corporation
Harris Brothers Company
Minter Homes Corporation

PROJECTION LANTERNS
Spencer Lens Co.
Trans-Lux Daylight Picture
Screen Corp.

PROJECTION MACHINES
Bell & Howell Company
Eastman Teaching Films, Inc.
National Theatre Supply Co.

PROJECTORS

Bausch & Lomb Optical Co
Holmes Projector Company PUBLIC ADDRESS SYSTEMS Graybar Electric Co., Inc. Western Electric Co.

PUMPS—Vacuum, Condensation, Centrifugal, Sump Nash Engineering Co.

RADIOS Radio-Victor Corporation of America

Radio-Victor Corporation of America
RANGES
Cleveland Range Company, The
Westinghouse Electric & Mfg. Co.
REFRIGERATION
General Electric Company
REINFORCED STEEL
Berger Manufacturing Company
Truscon Steel Company
RECORD SYSTEMS
Remington-Rand Business Service, Inc.
REPRODUCTION SYSTEMS
Western Electric Co.
ROLLING PARTITIONS

ROLLING PARTITIONS Wilson Corp., Jas. G.

RULERS Seneca Falls Rule & Block Co. SAFETY STAIR TREADS American Abrasive Metals Co.

SANDERS
Clarke Sanding Machine Company
SASH OPERATING DEVICES, STEEL
Detroit Steel Products Company
Truscon Steel Company

SASH, VENTILATING Detroit Steel Products Company SCIENTIFIC APPARATUS
Rowles Co., E. W. A.
Standard Electric Time Company
Welch Mfg. Co., W. M.

SCREENS—PICTURE
Eastman Teaching Films, Inc.
Trans-Lux Daylight Picture
Screen Corp.
SCRUBBING EQUIPMENT
Finnell System, Inc.

SEWAGE EJECTORS Nash Engineering Co Nash Engineering
SEWING MACHINES
Singer Sewing Machine Co.

Singer Sewing Machi SHADE ADJUSTERS Eveleth Mfg. Co. SHOWERS
Clow & Sons, James B.
Hoffmann & Billings Mfg. Co.

SLATED CLOTH
Beckley-Cardy Company
N. Y. Silicate Book Slate Co.
Weber Costello Company

SOUND PICTURES
Electrical Research Products, Inc.

SPRAY PAINTING EQUIPMENT DeVilbiss Mfg. Co., The Vortex Mfg. Co.

STAFF LINERS Weber Costello Company

Weber Costello Company

STAGE CURTAINS, EQUIPMENT
AND SCENERY
Acme Scenic Studios
Beck & Sons Co., The Wm.
Belson Mfg. Co.
Jackson Corp., A. P.
National Theatre Supply Co.
Novelty Scenic Studios
Perkins Curtain Carrier Co.
Standard Decorating Co.
Tiffin Scenic Studios
Twin City Scenic Company
Universal Scenic Studios, Inc.
Weiss & Sons, I.

STAIR TREADS
American Abrasive Metals Co.
Mills Company, The
Norton Company
Sanymetal Products Company

STEEL JOISTS
Truscon Steel Company

STEEL STORAGE CABINETS
Durabilt Steel Locker Co.
Medart Mfg. Co., Fred
North Western Steel Products Co.

STEEL WINDOWS

Detroit Steel Products Company

North Western Steel Products Company

Truscon Steel Company

STOOLS—STEEL ADJUSTABLE Vitek Mfg. Co. Vitek Mfg. Co.

TABLES
Gunn Furniture Company
Kimbail Company. W. W.
Mutschler Bros Company
Remington-Rand Business Service, Inc.
Welch Manufacturing Company. W. M.

TABLETS—BRONZE Russell & Sons Co., Albert TALKING MACHINES
Radio-Victor Corporation

TEACHER AGENCIES
Natl Association of Teacher Agencies
Teacher Agencies Directory TECHNICAL PAINTS

TELEPHONE SYSTEMS
Automatic Electric Company
Graybar Electric Co., Inc.
North Electric Mg. Company, The
Standard Electric Time Company

TEMPERATURE REGULATION
Johnson Service Company TOILET PAPER AND FIXTURES
A. P. W. Paper Company

TOWELS

A. P. W. Paper Company
Bay West Paper Company
Brown Company

Brown Company
TOILET PARTITIONS
Clow & Sons, James B.
Mills Company. The
Sanymetal Products Company
Structural Slate Company
Weis Mfg. Co., Henry

TRAVELS European Treasure Tours TRAVELS
European Treasure Tours
TYPEWRITERS
Remington-Rand Business Service, Inc.
Smith & Corona Typewriters Inc., L C
Underwood Typewriter Company
VACUUM CLEANING SYSTEMS
Spencer Turbine Company, The
Sturtevant Co., B. F.
VACUUM PUMPS
Dunham Company, C. A.
Nash Engineering Company
VALVES—FITTINGS
Bowlus Manufacturing Co., The
Clow & Sons, James B.
Crane Company
VENETIAN BLINDS

VENETIAN BLINDS
Burlington Venetian Blind Co.

Burlington Venetian Blind VENTILATING SYSTEMS Buckeye Blower Company Nelson Corp., The Herman Peerless Unit Vent. Co., In Sturtevant Company, B. F. VENTILATORS Sturtevant Co., B. F.

Sturtevant Co., B. F.

VOCATIONAL EQUIPMENT
Christiansen, C.
Columbia School Supply Co.
Kimbail Company, W. W.
Richards-Wilcox Mfg. Co.
Shelton & Company, E. H.
Wallace & Co., J. D.
Welch Manufacturing Company, W. M.

Weich Manufacturing Company, W WARD ROBES Evans, W. L. K.-M Supply Company Progressive School Equipment Mfg. Co., The Wilson Corp., Jas. G.

WASTE PAPER BASKETS
National Vulcanized Fibre Co.
North Western Steel Products Company

WASTE RECEPTACLES Solar-Sturges Mfg. Co.

WATER CLOSETS
Bowlus Manufacturing Co., The
Vogel Co., Joseph A.

WATER COLORS
American Crayon Company
Bradley Company, Milton

WATER PURIFIERS
Clow & Sons, Jas. B. (B. U. V.)
WAILAGE & Tiernan, Inc.

WATERPROOFING
Sonneborn Sons, L. WATER CLOSETS

WAX CRAYONS Bradley Company, Milton

WEATHERSTRIPS Athey Company, The Athey Company, The
WINDOWS—ADJUSTABLE
Austral Window Company
Detroit Steel Products Company
North Western Steel Products Co.
Truscon Steel Company
Universal Window Company
Williams Pivot Sash Company
WINDOW FIXTURES
Austral Window Company
Columbia Mills, Inc.
Peerless Unit Ventilation Co., Inc.
Williams Pivot Sash Company

WINDOW GUARDS
American Fence Construction Co.
Badger Wire & Iron Works
Logan Co.
North Western Steel Products Company
Stewart Iron Works Co., The

WINDOWS—REVERSIBLE Austral Window Company Detroit Steel Products Company Williams Pivot Sash Company

WINDOW SHADE CLOTH Columbia Mills, Inc. Du Pont de Nemours & Co., E. I. Hartshorn Company, Stewart

WINDOW SHADE ROLLERS Columbia Mills, Inc. Hartshorn Company, Stewart

WINDOW SHADES
Athey Company, The
Beckley-Cardy Company
Burlington Venetian Blind Co. Burlington Venetian Blind Co. Columbia Mills, Inc. Draper Shade Co., Luther O. Du Pont de Nemours & Co., E. I. Hartshorn Company, Stewart Maxwell & Co., Inc., S. A.

WINDOWS—STEEL
Detroit Steel Products Company
Truscon Steel Company

WIRE GUARDS
Badger Wire & Iron Works
Cyclone Fence Co.
Logan Co.
Stewart Iron Works Co., The

WOODWORKING MACHINERY Wallace & Co., J. D.

ADVERTISERS' REFERENCE INDEX

Acme Scenic Studios
Adam Flactric Company Frank 102
A P W Paper Company 140
American Abrasice Metals Co. 149
American Asphalt Tile Corporation 13
American Book Company151
American Crayon Company153
American Portable House Co160
American Scating Company 17
American Seating Company 17 Anchor Post Fence Company 116
Anchor Post Fence Company 116 Andrews Company The A. H. 28 Annin & Co 165 Arlington Seating Company 26 Asbestos Buildings Company 30 Associated Business Papers, Inc. 24 Atthey Company 142 Austral Window Company 4th cover Automatic Electric, Inc. 85 Automatic Pencil Sharpener Co 163
Annin & Co. 165
Arlington Seating Company 26
Ashestos Buildings Company 30
Associated Rusiness Papers Inc. 24
Athey Company 142
Austral Window Company 4th cover
Automatic Electric Inc. 85
Automatic Pencil Sharpener Co. 163
The training of the state of th
Badger Wire & Iron Works 165
Bay West Paper Co
Bay West Paper Co
Beckley-Cardy Company 32
Bell & Howell Company 198
Relson Manufacturing Co
Belson Manufacturing Co102 Berger Mfg. Company115
Biefeld & Company. Otto163
Binney & Smith Company151
Binney & Smith Company
Bowlus Mfg. Company, The
Brown Company, The169
Bruce Company, E. L 97
Bruce Company, E. L
Ruckeye Blower Co
Burlington Venetian Blind Co114
Garage Thanks Co 43
Carter Bloxonend Flooring Co 83 Celotex Company, The 93
Celotex Company, The 93
Century Brass Works, Inc
Chicago Gymnasium Equip. Co159
Chicago Hardware Foundry Co113
Christiansen (
Circle A Products Corp84 & 110
Clarin Manufacturing Co 33
Clarke Sanding Machine Co141
Clarke Sanding Machine Co
Classified Walls The 128
Classified Wants 164 Cleveland Range Company, The 128 Clow & Sons, James B 7
Clow & Sons, James B
Coldwell Lawn Mower Company140
Columbia School Supply Co 22
Congoleum-Nairn, Inc 73
Continental Chemical Corp131
Common & Drage Decearch Acc'n 76
Cram Company, The George F155 Crane Co
Crane Co
Cyclone Fence Company132
Cyclone Pence Company
Dayton Safety Ladder Co., The 94
Demco Library Supplies
Detroit Steel Products Co 72
DeVilbiss Company, The
Dick Co., A. B
Ditto, Incorporated105
Dodge Brothers Corporation 88 & 89
Dodge Brothers Corporation88 & 89 Dougherty & Sons, Inc., W. F134
Deanes Shade Co Luther O 110
Dutter Tack Correction The
Draper Shade Co., Luther O119 Dudley Lock Corporation. The128 Dunham Company, C. A138
Dunnam Company, C. A138
Durabilt Steel Locker Co 79
Eagle Soap Corporation

Eastman Teaching Films, Inc. 103 Edison, Inc. Thomas A. 2nd cover Electrical Research Products, Inc. 75 European Treasure Tours. 161 Evans, W. 30 Eveleth Mfg. Company. 161 Federation of Mutual Fire Insurance Companies 171 Finnell System, Inc. 3rd cover Gaylord Brothers 156
Gaylord Brothers 156 General Electric Company 123 General Utilities, Inc. 86 Gillis & Geoghegan, The 119 Graybar Electric Co., Inc. 5 Greene Tweed Corp. 144 Hamlin, Irving 133
Harris Brothers Co. 125 Hartshorn Company, Stewart. 150 Heggie Simplex Boller Co. 95 Heywood-Wakfeldt Co. 107 Hillyard Chemical Company. 118 Holden Patent Book Cover Co. 87 Holmes Projector Company 161 Holmes Company, Warren S. 133 Holophane Company, Inc. 91
Ideal Power Lawn Mower Co132 Iroquois Publishing Co157
Jackson Corp., A. P
Kewanee Boller Corp. 3 Kewaunee Mfg. Company. 71 Kimball Company. 196 K-M Supply Company. 90 Kundtz Co., The Theodor. 19
Laitdaw Brothers 157 Leitz, Inc. E Libbey-Owens Glass Company 74 Lippincott Company J. B. 154 Logan Company J. 18
Maple City Stamping Company
Narragansett Machine Co
Agencies 162 National Crayon Company. 28 National School Equip. Co. 27 National Theatre Supply Co. 108 National Vulcanized Fibre Co. 32 Natural Slate Blackboard Co. 1 Nelson Corp., The Herman. Jusert Newman Manufacturing Co., The. 163 N. Y. Silicate Book Slate Co. 160 North Electric Mig. Co., The. 98 North Western Steel Products Co. 121 Norton Company. 78 Novelty Scenic Studios. 161 Novelty Scenic Studios. 161
Oakite Products, Inc126

Daddook Cork Company	20
Paddock Cork Company	40
Park, William & True Co	10
Peabody Seating Co., The	18
Peerless Unit Ventilation Co	337
Perkins Curtain Carrier Company 1	0.2
Peterson & Co., Leonard	0.1
Pittsburgh-Des Moines Steel Co1	12
Potter Manufacturing Corp1	59
Premier Engraving Co	65
Profesional School Service	
Directory1	60
Progressive School Equipment Mfg.	
Paddock Cork Company Park. Winton & True Co Pearly Seating Co., The. Peerless Unit Ventilation Co Peerless Unit Ventilation Co Perkins Curtain Carrier Company Petreson & Co. Leenard Pittsburgh-Des Moines Steel Co Premier Hanufacturing Corp Professional School Service Directory Procressive School Equipment Mig. Co., The. Roddis Lumber & Veneer Co.	96
Roddis Lumber & Veneer Co Rowles Co. E W. A. Royal Metal Mfg. Company .21 and Rundle-Spence Mfg. Co	81
Rowles Co. E. W. A	29
Royal Metal Mfg Company, 21 and	25
Rundle-Spence Mfg Co 1	16
Russell & Sons Co Albert 1	80
2 4 G	00
Sare-Guard Check Writer Corp	28
Santord Manufacturing Company	33
Sant Products Company	27
Sanymetal Products Company	10
School Architects Directory 14 and	15
Sengbuch Self-Closing Inkstand Co.	26
Sheldon & Company, E. H	09
Russell & Sons Co., Albert. Safe-Guard Check Writer Corp. Sanford Manufacturing Company. Sani Products Company. Sani Products Company. Sanymetal Products Company. School Architects Directory. 14 and Sengbuch Self-Closing Inkstand Co. Sheldon & Company. E. H. Singer Sewing Macline Co. Solar-Sturges Mfg. Co. Sonnehorn Sons. L. Spencer Lens Company. Spencer Turbine Company. Stakmore Company. Stakmore Company. Standard Blackboard Co. Standard Electre Time Co The. Standard Gas Equipment Corp. Standard Gas Equipment Corp. Standard Manufacturing Co., The. Standard School Equipment Co. Steffens-Amberg Company. Stewart Iron Works Co., The. Sturtevant Company. B. F.	23
Solar-Sturges Mfg. Co	117
Sonneborn Sons, L	10
Spencer Lens Company	156
Spencer Turbine Company	8
Stakmore Company	16
Standard Blackboard Co	163
Standard Electric Time Co., The	36
Standard Gas Equipment Corp	133
Standard Manufacturing Co., The.	200
Staffang Ambana Company	161
Stenens-Amberg Company	L
Stewart from Works Co., The	130
Sturtevant Company, B. F	148
Tannewitz Works, The	160
Taylor Company, Halsey W	126
Teacher Agencies	16
Tiffin Scenic Studios	16
Tiffin Scenic Studios Titusville Iron Works Co., The	143
Trans-Lux Daylight Picture Screen	
Corn	15
Truscon Steel Company	9.
Corp. Truscon Steel Company Tucker Duck & Rubber Co	0
Twin City Seemis Co	2 %
Twin City Scenic Co	19
U. S. Gutta Percha Paint Co	13
U. S. Inkwell Company Universal Scenic Studio, Inc	3
Universal Scenic Studio, Inc	16
Universal Window Company	- 8
Valleyco Company, The	9
Vitek Manufacturing Co. Inc.	16
Vonnegut Hardware Co	4.
Valleyco Company, The	1
voices mig. co	
Wallace & Tiernan, Inc	. 7
Wayne Iron Works	. 13
Wels Mfg. Company, Henry	.17
Weiss & Sons, I	.16
Wallace & Tiernan, Inc. Wayne Iron Works. Wels Mfg. Company, Henry. Welss & Sons, I. Western Electric Company.	
westinghouse Electric and	
	. 12
Williams Iron Works	. 9
Williams Pivot Sash Co	. 8
Wilson Corp., Jas. G	. 9
Williams Iron Works Williams Pivot Sash Co Wilson Corp., Jas. G Wittliff Furniture Brace Co	. 2





Who He Was

Mr. J. C. Klug, who was for many years principal of the North Division High School in Milwaukee, was fond of telling a true story concerning himself. When he took over the school, he inherited a janitor who suffered with chronic laziness. The man had been able to bulldoze the previous principal and continue his slovenly habits without interference.

Finally, one day Mr. Klug went down to the board offices and asked the superintendent of jani-tors to look into the matter himself. When the superintendent and the principal came, they found the janitor in the boiler room seated in an old easy-chair, smoking and reading the paper. The man didn't even rise, and his cold-blooded answers finally infuriated the superintendent of janitors until he fairly shouted:

"Why don't you get busy and keep this building clean? Who the hell do you think you are around here, that you can sit around and do nothing — the principal?"

At Atlantic City

Hotel clerk: "Have you a reservation?"
Supt. from Oklahoma: "Do I look like an Indian?"

Not Understood

Professor: "And furthermore, a man who cannot express himself so as to be understood is an idiot! Now do you understand me?"

Student: "No, sir!"

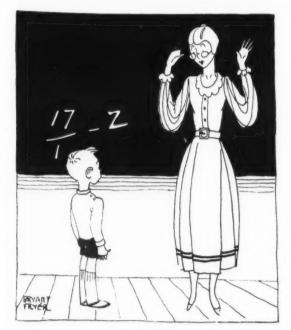
The Old Ones Are Best! Mr. Arthur Dean has the courage to print the following joke which we saw many years ago applied to the life of a soldier:

"You have two alternatives; your teacher is either easy or hard. If he is easy, you have nothing to worry about. If he is hard you have two alternatives; either you study hard or you bluff. If you study hard you don't need to worry. If you bluff you have two alternatives; either your bluff works or it doesn't. If it doesn't, you have two alternatives; either you are conditioned or you flunk. If you are conditioned you don't need to worry. If you flunk, you won't have to worry any longer. Therefore, why worry?"

Milton in Tabloid

English Prof.: "Tell me one or two things about John Milton.

Ruminating Plebe: "Well, he got married and he wrote Paradise Lost. Then his wife died and he wrote Paradise Regained.—Annapolis Log.



That Too

Teacher: "What is meant by 'Fifty-Four Forty or Fight?"

Bright Pupil: "It means that we wanted fifty-four

degrees for our northern boundary, and if we didn't get it in forty minutes we would fight."



NEW STANDARD CATALOG OF SCHOOL **FURNITURE**

The Standard School Equipment Company, of Siler City, North Carolina, has just issued its latest catalog of school furniture, including teachers' desks, book-cases, classroom and teachers' chairs, stools, restroom, and miscellaneous equipment.

A feature of the Catalog is the new posture tabletarm chair No. 93, which is designed to afford correct seating, and the Louisville tablet-arm chairs, which are built to meet the special requirements of high schools, colleges, and universities.

A request addressed to the Standard School Equip-ment Company will bring complete information and price list.

DURA-SEAL FINISH FOR MAPLE AND OTHER WOOD FLOORS

The Beem Company, paint engineers, of Chicago, Illinois, have just put on the market a new material for finishing wood floors. The material is known as Dura-Seal, which is a wood hardener and finish, and which contains neither wax nor varnish, but a high

percentage of chemically treated china-wood oil.

Mr. G. A. Beem, 707 Linden Ave., Wilmette, Ill., is interested in the marketing of the material and is developing a complete series of directions for finishing wood floors with this material. The directions will be of special interest to all school authorities who are engaged in the problem of maintaining wood school-

SOUND MOVIES FOR SCHOOLS

The Bell & Howell Company, Chicago, Ill., have just placed on the market a portable project-o-phone, a practical portable equipment for presenting sound movies in schoolrooms.

The device which has been thoroughly tested in actual use, consists of three small units which can be easily carried from place to place. The device is the result of extended experiments for a number of years and has been tested in general use.

Complete information and prices may be obtained by any school official upon request.

NEW CATALOG ON AUSTRAL WINDOWS

The Austral Window Company, of New York City, has issued its new Catalog No. 28, illustrating and describing austral window hardware for wood and steel construction. The austral windows provide a permanent source of comfort and health for pupils and teachers, without increasing the cost of the building, or adding to the cost of maintenance. They have satisfied the demands of school authorities and school hygienists for good ventilation, pure air without draft, and control of light.

The catalog includes working drawings and com plete specifications for the installation of Austral windows, shades, and screens. The last part of the booklet contains a number of photographs of schools in which the Austral windows have been successfully installed.

School authorities and architects who are interested may obtain a copy of the booklet upon request.

CLARIN COMPANY SUFFERS FIRE DAMAGE

The Clarin Manufacturing Company, Chicago, Ill., on December 15, suffered the loss of its plant through a destructive fire. The loss is estimated at approximately \$35,000. The Clarin Company is known in the school field for its manufacture of Ideal folding chairs, which are in use in schools throughout the country

The firm has established its new home at 4640 West Harrison St., where it enjoys the convenience of a large plant, with increased producing facilities. The first shipment out of the new plant was made fifteen days after the old building was destroyed.

MR. RUDOLPH JOINS NATIONAL THEATER SUPPLY COMPANY

Mr. E. E. Rudolph, Jr., formerly with the Volland Scenic Studios, of St. Louis, Mo., has joined the National Theater Supply Company, of Chicago. Mr. Rudolph has charge of the western territory, with headquarters at St. Louis.

NEW BAUSCH & LOMB BOOKLET

The Bausch & Lomb Optical Company, of Rochester, , has issued a 54-page booklet, illustrating and describing its projection equipment for educational purposes

The booklet which has been prepared especially for instructors and purchasing agents, lists lantern-slide

projection, opaque-object projection, film-slide projection, daylight projection, and balopticons. A new Model KRMS balopticon, just developed for use with a translucent screen, projects both opaque objects and lantern slides, and allows for instant interchange by means of a shifting light shield. The balopticon is only 18 in. long, weighs less than 21 pounds, and is capable of being moved from room to room to serve a variety of uses

Complete information and prices may be obtained by any school official or instructor.

NEW PAMPHLET ON LIGHTING

The Westinghouse Electric & Manufacturing Company, of South Bend, Ind., has just issued its new Catalog 219-B, which devotes 28 pages to illustrations and descriptions of special lighting systems manufactured by the firm.

The pamphlet gives a list of schools in which the Westinghouse sollux and sollaire installations have been made. Complete information and prices of the new Westinghouse electric lighting fixtures may be obtained by writing to any branch of the firm, or to the advertising department at East Pittsburgh, Pa.

NEW EASTMAN CLASSROOM FILM

The Eastman Teaching Films, Inc., Rochester, N. Y., have just issued a new classroom film entitled, "Limestone and Marble." The film is divided into three units, natural limestone, artificial limestone, and marble. The film is 400 ft. in length, the equivalent of 1,000 ft. of 35 millimeter film, and is accompanied by a teacher's guide with suggestions by various school authorities.

WEIS PLANT TURNED OVER TO **EMPLOYEES**

The plant of the Henry Weis Manufacturing Company, of Elkhart, Ind., was recently turned over to seven of the concern's old and trusted employees. The new owners of the company are Paul W. Kerr, who was formerly vice-president; Thad W. Clark, secretary; M. D. Rapp, assistant sales manager; Fred Pausch, eastern district sales manager; Robert W. Gunts, production manager; Arthur F. Baum, chief engineer, and Max Leudke, foreman.

It is the purpose of the new owners to continue the policy inaugurated by the company's founder. There are about 80 persons on the payroll of the company.

The event was celebrated by a dinner given by the purchasing group and other employees for Mr. Henry and Mr. William Weis, who have ceased their activities in the management of the business.

The present capital stock of the company is com-posed of \$50,000 in preferred and \$75,000 in common stock, with several hundred thousand dollars in additional assets. Mr. Henry Weis and Mr. William Weis owned two thirds of the common stock and all of the preferred.

NEW DEVILBISS SPRAY-PAINTING OUTFIT

The DeVilbiss Company, of Toledo, Ohio, has just placed on the market a new spray-painting outfit, which is of interest to painting and decorating classes in the school shop. The new DeVilbiss outfit provides in one compact, easily portable unit, an efficient device, which has adequate capacity and dependability, and which sells at only \$39.50.



THE NEW DEVILBISS PAINT GUN

The outfit includes a new, improved air compressor, a 1/5-h.p. universal electric motor, and a spray gun weighing only 11/4 pounds. The improved design of the pressure-feed spray gun makes possible easy atomiza-tion of the painting material and assures satisfactory results. The design of the gun makes it possible to use

practically any finishing material.

Complete information and prices of the spray-painting outfit may be obtained from the DeVilbiss Company upon request.

NEW LEITZ BINOCULAR MICROSCOPE

E. Leitz Company, New York City, has just issued a descriptive circular on the new wide-field binocular microscope W.F.A.M, with automatic multiple objective nosepiece, an instrument which serves excellently in various fields of scientific endeavor.

The body of the microscope, which resembles in construction the Greenough-Leitz series of binocular microscopes, is provided with large ocular tubes for accommodating the eyepieces of the wide-field A special device is provided for rapid and simple shifting, from one objective to another, and for a permanent alignment of the optical system. The range of usefulness of the microscope covers biological science, geology, metallography, general engineering, jewelry work, and industrial and commercial testing.

School officials and instructors who are interested, may obtain complete information and prices from E. Leitz, Inc., 60 East Tenth St., New York, N. Y.



A Sound Business for 177 years

IN 1752 the first mutual fire insurance company was founded — the first insurance company of any kind in America. This company operates actively today. Many other mutual fire companies are over

100 years old.

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ewelry rested, om E. There is no other business, important in the commercial life of the nation today, that has back of it so much of tradition; of obligations faithfully met; of actual public service—as mutual fire insurance.

The remarkable stability and vitality of mutual insurance is based on absolute adherence to one basic aim

—the furnishing of sound insurance at the lowest possible cost to the insured.

Mutual fire insurance companies have paid losses

promptly and fully—have led the way in fire prevention — have returned annual savings to policyholders ranging from 20% to 50% of the premiums received.

A booklet outlining the principles and workings of mutual fire insurance will be sent upon request. No solicitation will follow. Address Mutual Fire Insurance, Room 2217, 180 North Michigan Avenue, Chicago, Illinois.

An Unparalleled Record

75 leading, legal reserve companies under State supervision constitute the Federation of Mutual Fire Insurance Companies. The oldest Federation company was founded in 1752. Five others are more than 100 years old. Of the remaining companies—

9 are between 75 and 100 years old 10 are between 50 and 75 years old

30 are between 25 and 50 years old 20 are between 10 and 25 years old

The Federation companies are protecting property to the extent of six billion dollars — have assets in excess of ninety million dollars—have returned to policyholders savings of more than one hundred and thirty millions of dollars.





A complete showing of the WEISTEEL line will be presented at the Atlantic City convention of the Department of Superintendence, National Educational Association, February 22 to 27.

The new Metalunits, already being widely talked about in architectural circles, will be one of the high points of the exhibit. For the first time the new flush WEISTEEL, the result of four years of engineering by Weis, will be exhibited.

The exhibit, in booths E-24 and E-26, will include, of course, the older and more familiar WEISTEEL products. Marvin D. Rapp assistant sales manager at the factory, and, Fred L. Pausch, eastern sales supervisor, will be in charge. You are most cordially invited to visit this exhibit . . . HENRY WEIS MFG. Co., INC., Elkhart, Indiana.

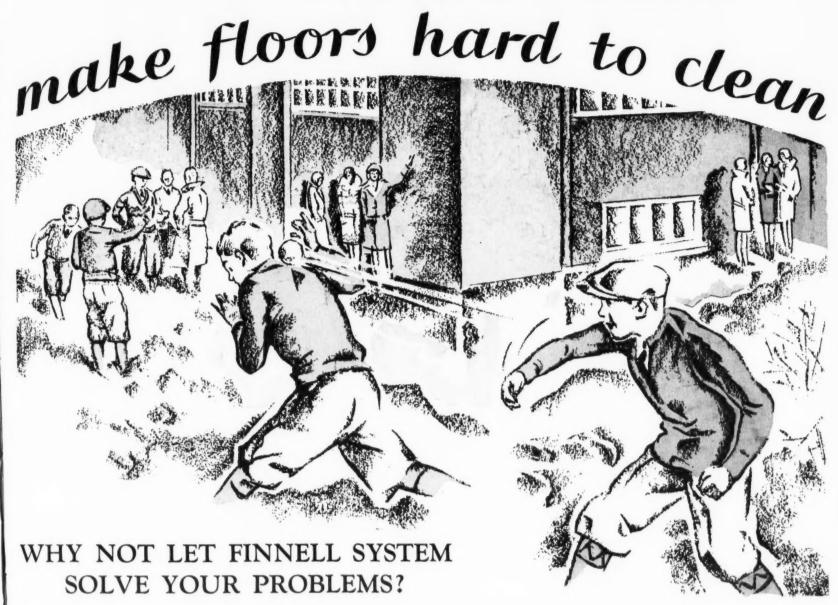
See these WEIS Products in Booths E-24 and E-26

Panel WEISTEEL Compartments Flush WEISTEEL Compartments WEIS Metalunits (Stall Door and Hardware)

WEISALLOY (alluminum alloy) Shower Partitions

WEISTEE

SNOWY, MUDDY FEET



THROUGH snow and ice, through rain and mud, the youngsters gaily tramp, caring little where they step. Much of this dirt, grime and mud is carried with them into the classrooms. It's no wonder caretakers, custodians, and superintendents sometimes despair of keeping school floors clean.

And yet schools, perhaps more than any other institution, *must* keep floors clean. Taxpayers expect it. The children's well-being demands it.

FINNELL SYSTEM will meet the need

The FINNELL can keep floors scrupulously clean where hand methods fail, because it can do the work much faster, cover more space,

and do a far better job than is ever possible the old-fashioned way.

The FINNELL scrubs, waxes, polishes electrically. Can be used on any kind of floor. The fast-moving brushes dig down beneath even the most stubborn coating of oil and grime until every particle of dirt is routed.

Cleans every square inch of space

In the corridors and gymnasium, in class rooms and locker rooms where

THE FINNELL SYSTEM

will be on exhibit at the
National Education Association
Department of Superintendence Convention
BOOTH D-40

CONVENTION HALL
ATLANTIC CITY—FEB. 22-27
You are cordially invited to call and inspect the various sizes and models.

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